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ABSTRACT

The study deals with manpower resources on the San Carlos Reservation and is a part of a larger study entitled "Manpower Resources in the Southwest: A Pilot Study," which deals with 5 reservations in the southwestern United States. The primary purpose of this document, as noted, is to provide basic and necessary manpower information essential for planning and developing effective programs for San Carlos Indians. It deals with on-reservation employment sources (nonfarm), characteristics of the manpower resource, employment and unemployment (including agriculture), industry and occupational characteristics, training and education, and income and expenditure patterns. The document also gives insights into the extent of manpower utilization, the degree of poverty, and the potential for more effective use of reservation Indians. Tables of statistics are interspersed throughout the document. Related documents are RC 004 747 and RC 004 748. (EL)

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SAN CARLOS RESERVATION MANPOWER RESOURCES

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INDIAN MANPOWER RESOURCES IN THE SOUTHWEST

A PILOT STUDY

BENJAMIN J. TAYLOR
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RC0047 49

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College of Business Administration • Arizona State University

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San Carlos Reservation Manpower Resources

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Benjamin J. Taylor
Principal Investigator
Indian Manpower Resource Study

1969
Bureau of Business and Economic Research
College of Business Administration
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Preface

The Indian Manpower Resource Study was officially started in June, 1967. It was made possible by a research grant to the Bureau of Business and Economic Research, College of Business Administration, Arizona State University, from the United States Employment Service by way of the Arizona State Employment Service.

This monograph deals with Indian manpower resources on the San Carlos Reservation and is a part of a larger study entitled *Indian Manpower Resources in the Southwest: A Pilot Study*. The larger study deals with five reservations in Southwestern United States. In addition to San Carlos, it includes the Fort Apache, the Papago, the Acoma, and the Laguna reservations.

No attempt is made to deal with the sampling methodology utilized to generate data since the curious reader may consult the larger study for a thorough discussion of the procedure. It is necessary to mention here, however, that the sampling procedure was proved accurate with regard to the overall reservation characteristics, but some questions contained so many parts that cell frequencies should be considered as only suggestive as to result.

The primary purpose of this monograph is to provide basic and necessary manpower information essential for planning and developing effective programs and services for San Carlos Indians.

Benjamin J. Taylor, Director
Bureau of Business and
Economic Research

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San Carlos Reservation Manpower Resources

The San Carlos Reservation was established December 14, 1872 by Presidential Executive Order. It is located in eastern Arizona to the south and adjacent to the Fort Apache Reservation. Over 1.6 million acres of land are held in trust for the San Carlos Apache by the Bureau of Indian Affairs.[1]

Most of the Indian acreage is mountainous with a high elevation of 8,200 feet in the northeastern section of the tribal possession. Elevations also reach a low of 2,290 feet near Coolidge Dam. Annual precipitation averages fifteen inches over the entire terrain. Of course, there is considerable variation from the average by location. Available natural resources include approximately 90,000 acres of ponderosa pine forest, asbestos, gypsite, tufa stone, and considerable range land for cattle grazing. Livestock raising has been an important industry for the San Carlos Apache.

The on-reservation population age 16 and and over numbers 1,565 on the basis of records maintained by the Public Health Service Indian Hospital. The Indian Manpower Resource Study sample size was 390 based on the number of persons over 16 years of age considered of working-force age. Only 350 were usable responses.

This study deals with on-reservation employment sources (nonfarm), current characteristics of the manpower resource, employment and unemployment (including agriculture), occupation and industry

characteristics, training and education, and income and expenditure patterns. The principal objective here is to provide a detailed description of the San Carlos Apache human resource, and to give insights into the extent of manpower utilization, the degree of poverty, and potential for more effective use of reservation Indians.

On-Reservation Nonfarm Employers

The San Carlos Apache has few opportunities for on-reservation employment in nonfarm occupations. Table I reveals that as of July, 1968, there were 391 Indians employed on the reservation by several types of employers. The single most important reservation employer is the tribe itself. The tribe operates a few enterprises and provides normal local governmental functions. It maintains its own general

TABLE I
SAN CARLOS RESERVATION NONFARM INDIAN EMPLOYMENT

Employer	Number Employed
Arizona State Department of Public Welfare	74
Arizona State Employment Service	1
Bureau of Indian Affairs	58
Bureau of Indian Affairs Job Corps Center	13
Asbestos Mining and Milling	24
Public Health Service Indian Hospital	42
Public schools	39
Trading posts	13
San Carlos Apache Tribe	76
Logging and milling	51
TOTAL	391

store in addition to those operated by private traders. Sales persons, butchers, and managers are employed from the Indian population. Service stations are also operated by the tribe, employing a few persons to provide the normal services associated with gasoline stations. Policemen, judges, and court clerks also receive their positions and remuneration from the tribal governments, as is also the case with councilmen.

The Arizona State Department of Public Welfare as an employer follows the tribal government in number of Indians employed. The

types of work performed range from clerk-typists to mechanics and medical records clerk. The agency employs seventy-four Indians in the total of ninety-three jobs.

The Bureau of Indian Affairs is third largest employer of San Carlos Indians. The agency employs seventy-one of the tribal members, including those in the Job Corps Center. The San Carlos Job Corps Civilian Conservation Center utilizes tribesmen as resident youth workers, clerks, and for maintenance of buildings and grounds. The BIA's general operation requires the services of reservation Apaches in such jobs as waiters, fire control workers, secretaries, and construction inspectors.

The Indian Hospital operated by the United States Public Health Service provides seventy persons with jobs, and Indians account for forty-two of the total. Tasks performed by Indians range from clerk typists to nurses.

Public school employment accounts for thirty-nine Indian jobs. Apaches are utilized largely as teacher's aids and bus drivers, but a few jobs are available for janitors and clerk typists.

The mining and milling of two asbestos firms offers jobs for twenty-four Indians. The employed Apaches in this industry are concentrated in the laborer category.

The availability of Ponderosa pine on the reservation provides the basis for a logging and milling firm. Indians account for fifty-one of ninety employees. A relatively wide assortment of jobs are performed by Apaches with heaviest concentration in chain and stacking tasks.

Traders operate the general merchandise stores; these provide on-reservation employment for thirteen tribesmen as cashiers and general clerks.

Total on-reservation jobs are not plentiful with only 391 available Indian positions for 1,565 persons of working-force age, leaving considerable work potential to be utilized on or off the reservation. The ability of the Indians to compete for off-reservation jobs depends upon their particular qualifications. The nature of the San Carlos manpower resource is important to an understanding of its successes and failures in job market activity.

Characteristics of the Manpower Resource

The composition of the San Carlos population 16 and over is shown in Table II based upon the survey of 350 respondents. Females

account for nearly 53 percent of the total working-age population and males, 47 percent.

TABLE II

SAN CARLOS POPULATION BY AGE AND SEX

	Females		Males	
Age Group	Percent of Total Females	Percent of Total Population	Percent of Total Males	Percent of Total Population
16-19	12.4	6.6	15.8	7.4
20-29	19.5	10.3	18.8	8.9
30-39	23.8	12.6	24.9	11.7
40-49	18.4	9.7	12.1	5.7
50-59	12.4	6.6	12.1	5.7
60-69	9.2	4.9	9.7	4.6
70-79	2.7	1.4	4.2	2.0
80-89	1.6	0.9	1.2	0.6
100-109	0.0	0.0	1.2	0.6
TOTAL	100.0	53.0*	100.0	47.2*

N = 350; 185 females; 165 males.
* The two categories combined do not sum to 100 percent due to rounding.

Age and Sex

Heaviest age group concentration of both sexes is the 30-39 category. Approximately 24 percent of women and 25 percent of men are in their thirties and their combined total represents nearly one-fourth of the total working-age population. It is in this age group that family responsibilities are usually considered high because they are the parents of school age children.

Females outnumber men in the 40-49 age category and these women represent 18 percent of all women and nearly 10 percent of the total San Carlos population. Males of the same age, however, represent only about 12 percent of all males, and 6 percent of the San Carlos population.

Generally, women of working-force age outnumber men in nearly every age category except the teen-age and over 70 groups. There are more teen-age males available to provide labor force participation potential than females. Approximately 7 percent of the working-age population are males between ages 16-19. Slightly fewer females are of the same age (6.6 percent). Among men, however, the same group

constitutes nearly 16 percent of all males while teen-age girls account for only 12 percent of women. Young adults aged 20-29 represent 19 percent of the working-age population with women providing 10 percent of the population compared to 9 percent for men.

The proportion of the working force represented by women in their fifties is larger than for men the same age. Yet, it seems that the chances for women to reach older age are less than is the case for men. Nearly 62 percent of tribal women are between ages 20-49 whereas only 56 percent of men are in the same group.

The dispersion of the population in the age categories 16-19 indicates a significant potential for productive employment. The population is youthful enough to provide a substantial pool of labor to possible reservation employers in terms of numbers alone. However, it is recognized that the potential for labor force activity involves more than age. Some other characteristics of the San Carlos population are needed to speculate on the potential for labor force attachment.

Family Characteristics

Marital status provides insights into the economic need for permanent attachment to the labor force. It should also be recognized, however, that single persons may have family responsibilities too. This is particularly the case on Indian reservations with a long tradition of extended family living. Table III provides the marital status of the San Carlos Apache based on 349 responses.

TABLE III
MARITAL STATUS OF THE POPULATION

Marital Status	Percent
Married	59.6
Widowed	7.2
Divorced	3.7
Separated	3.7
Never-married	25.8
TOTAL	100.0

N = 349

Marital Status. Roughly 60 percent of the population is married. This percentage indicates a substantial proportion of the population

has cause to desire jobs. The extent of female employment need is a function of several things. One factor in female work needs is the level of family income coupled with established standards of living. The inability of men to obtain income places the burden upon women or young people to attempt to close the gap for subsistence purposes.

Approximately 26 percent of the working-age population has never married. A significant proportion of this group is likely to fall in the teen-age category; these never-marrieds have fewer responsibilities for earning a livelihood than their older counterpart. Approximately 7 percent of the population are widowed, and these probably are found largely in the older age groups.

Divorce and separation is found among 7.4 percent of Apaches over 16 years of age. It is obvious that the family structure appears somewhat less stable than is the case within some other tribes in the study. For example, divorced Papagos account for only 1.6 percent of the population whereas on the San Carlos Reservation, the percentage is over twice as high. Divorce and separation normally place greater burdens on both sexes to attach themselves to the labor force. That is to say, it is more difficult to obtain income sufficient to support two separate places of abode. Consequently greater pressure to find work is likely to exist.

Number of Children. Another revealing aspect of family structure is reflected in Table IV, which illustrates the number of children

TABLE IV

NUMBER OF CHILDREN REPORTED BY RESPONDENTS

Number of Children	Percent
None	26.8
One	6.4
Two	8.8
Three	10.5
Four	8.8
Five	9.3
Six	8.2
Seven	7.6
Eight or more	13.7
TOTAL	100.1*

N = 349

* Does not sum to 100 percent due to rounding.

reported by respondents. The median number of children based on all responses, including the never-marrieds is three. It is recognized, however, that inclusion of the never-marrieds may distort the family size picture unless, of course, they in fact have children of their own. Some of the respondents included in the category may have been married by common law, but do not consider themselves married by definition. Despite the possible distortion just mentioned, it is obvious that family size is relatively large. Nearly 14 percent have eight or more children. Approximately 48 percent of the respondents over 16 have four children or more. Such a finding does not imply that all reported children are dependent on parents for support. Indeed, many have families of their own and may be totally independent of parents for sustenance.

TABLE V
NUMBER OF CHILDREN BY MARITAL STATUS
(Percent)

Marital Status		Number of Children									Info. not Avail.	Total
		1	2	3	4	5	6	7	8+	0		
Married	(1)	6.7	10.1	11.5	10.1	13.5	11.5	10.1	20.7	5.3	0.0	100.0
	(2)	4.0	6.0	6.9	6.0	8.0	6.9	6.0	12.3	3.1	0.3	
Widowed	(1)	16.0	12.0	8.0	16.0	8.0	12.0	8.0	12.0	4.0	4.0	100.0
	(2)	1.1	0.9	0.6	1.1	0.6	0.9	0.6	0.9	0.3	0.3	
Divorced	(1)	7.7	23.1	15.4	15.4	0.0	7.7	15.4	7.7	0.0	7.7	100.1*
	(2)	0.3	0.9	0.6	0.6	0.0	0.3	0.6	0.3	0.0	0.3	
Separated	(1)	0.0	23.1	30.8	23.1	15.4	0.0	7.7	0.0	0.0	0.0	100.1*
	(2)	0.0	0.9	1.1	0.9	0.6	0.0	0.3	0.0	0.0	0.0	
Never-married	(1)	3.3	0.0	4.4	0.0	0.0	0.0	0.0	0.0	88.9	3.3	99.9*
	(2)	0.9	0.0	1.1	0.0	0.0	0.0	0.0	0.0	22.9	0.0	
Info. not avail.	(1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
	(2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	
TOTAL	(2)	6.3	8.7	10.3	8.6	9.2	8.1	7.5	13.5	26.3	1.2	99.7*

N = 350
(1) = Percent of total in each marital status category.
(2) = Percent of total responses.
* Does not sum to 100 percent due to rounding.

Table V provides data regarding number of children by marital status. Such a refinement permits the elimination of the never-married category except when children are reported.

The median number of children reported by the married group is five compared to a median of three children when the group includes the never-marrieds. Again this number does not indicate current dependency, but it does indicate the relatively large size of San Carlos Reservation families. Nearly 21 percent of the married individuals reported having eight or more children. Another 10 percent have seven. Nearly 12 percent report six children. Only 5 percent of married individuals have no children and another 7 percent only one.

Only 11 percent of the never-marrieds report having children, but 4 percent have three, and 3 percent have one child. The median number for the widowed group is four; but this group is not large relative to the total population. It is likely that children of the widowed group are beyond the dependent stage since the widowed are likely to be found in an older age group.

Divorced respondents reported a median of four children, and those who are separated reported three children. Divorces and separations, however, do occur even among those persons with seven, eight, or more children.

Taken together, Tables IV and V make it obvious that the San Carlos Apache has rather extensive family responsibilities. Large families are prevalent, and there appears to be incentive to work even if this desire is not expressed in the form of actively seeking work. The extended family pattern can place significant pressures on various family members to find income despite the age of the children. Children of various ages may remain in or near the home of parents and share in the fortunes or misfortunes of the extended family's economic life.

Educational Attainment of the Population

Employer hiring practices vary, but educational attainment is usually one of the most important variables considered before hiring employees. This is particularly true when economic activity is relatively slow and labor markets generally reflect excessive supply relative to demand. In competing for scare jobs at such times, persons with higher educational attainments are likely to meet with greater success than those with less. Table VI reveals the educational attainments of working-age San Carlos Apaches.

It is significant to note that not a single respondent reported the attainment of a college degree. However, men are more likely to go on to college than women. A few women (2.16 percent of all fe-

males) completed one year of college, but not a single respondent achieved higher formal training than this. Nearly 3 percent of men completed one year of college, and almost 1 percent of males reported they had completed the second and third years of college. The pioneering experiences of the few San Carlos Apaches in starting college educations should make the path somewhat easier for other young Apaches to go on to colleges and universities in the future. The attainment of college degrees, however, will be economically useless unless the recipients are willing to move to locations where their abilities are in demand. An alternative is, of course, development of

TABLE VI
EDUCATIONAL ATTAINMENT OF THE POPULATION

Educational Attainment by Grade Completed	Female		Male	
	Percent of Total Population	Percent of Total Females	Percent of Total Population	Percent of Total Males
None	0.9	1.6	0.6	1.2
1	0.6	1.1	0.6	1.2
2	0.6	1.1	2.0	4.2
3	0.3	0.5	0.6	1.2
4	2.3	4.3	0.9	1.8
5	2.6	4.9	2.3	4.9
6	4.6	8.7	2.6	5.5
7	3.4	6.5	2.0	4.2
8	7.7	14.6	6.6	13.9
9	5.7	10.8	8.6	18.2
10	10.0	18.9	8.0	17.0
11	5.1	9.7	5.4	11.5
12	6.6	12.4	4.0	8.5
13	1.1	2.2	1.1	2.4
14	0.0	0.0	0.3	0.6
15	0.0	0.0	0.3	0.6
16	0.0	0.0	0.0	0.0
17+	0.0	0.0	0.0	0.0
Info. not available	1.4	2.7	1.4	3.0
TOTAL	52.9*	100.0	47.3*	99.9**

N = 185 females; 165 males.
* The two categories combined do not sum to 100 percent due to rounding.
** Does not sum to 100 percent due to rounding.

the reservation economy to absorb such degree holders in their areas of competency. Such a situation is likely to require a long period of time in the absence of massive governmental subsidies.

Male Apaches seem to have greater incentive to go on to high school than females, but they do not remain to receive diplomas. Nearly 47 percent of men have dropped out after the ninth, tenth, or eleventh grades. Aside from the few who went to college, only 8.5 percent of the male population or 4 percent of the working-age population completed high school. Male high school dropouts represent twenty-two percent of the total San Carlos population.

Nearly 21 percent of the total population are female high school dropouts. They account for 39 percent of all working-age females. Women fare somewhat better than men in achieving high school diplomas. Approximately 12 percent of all women, constituting 6.6 percent of the total population, completed high school. The higher incidence of completion may reflect a lesser burden on females to aid in family support. Even so, the record clearly indicates a low occurrence of high school completion on the part of both sexes. Neither sex appears to have much pressure placed on them to earn high school diplomas.

A significant proportion of both males and females end their formal training at the eighth grade level. Nearly 15 percent of women, considered of working age at the time of the study, ended their educations at the completion of grade school; they constitute nearly 8 percent of the total population. For men the percentage for eighth grade termination is similar: approximately 14 percent of men or about 7 percent of the total working-age population. Such a record imposes serious limitations to competing for off-reservation jobs.

The record is even more revealing when it is considered that 38 percent of all on-reservation males have ended their formal schooling at some point below eighth grade, or did not attend school at all. They account for 18 percent of the total San Carlos population. It is likely that the older Apaches largely make up this total.

Females also include a high percentage of grade school dropouts. Forty-three percent of women have ended their formal years of education at some point during the first eight years. They constitute nearly 23 percent of the total population. Some, of course, did not attend school at all.

In the past, there has been little economic incentive for the San Carlos Apache to attend school. The result is serious in terms of

either competing for off-reservation employment or in attempting to attract employers on to Indian land. Retraining for jobs would entail a vast undertaking encompassing the entire population. While a few have attained educational levels that might qualify them for employment, most have not. Firms attracted to the reservation under current manpower conditions could be those requiring the services of marginal workers. Employers requiring more refined skills than those normally possessed at the lowest labor force entry phase will have to provide considerable on-the-job training. Federal manpower programs could have the effect of alleviating the situation somewhat. Even so, the San Carlos Indian may have to demonstrate a willingness to relocate off the reservation.

Facility With English. An important prerequisite to employment is the ability to receive and execute instructions given in English. A determination of this ability was attempted by asking respondents, "What language do you most often speak in the home?" Slightly more than one-half (51.55 percent) revealed that an Indian language was spoken more than English in the home. The remainder usually speak English at home. English is spoken by approximately 94 percent of the total population, leaving roughly 6 percent that cannot do so. This characteristic was uncovered by asking respondents, "Do you speak English?" It is likely that the elderly are the only ones unable to speak the English language. Still another question asked was, "Do you read English?" Ninety-two percent said they could; such a response leaves 8 percent that cannot read English. This finding is highly consistent with the educational record discussed previously. There is approximately a difference of 2 percent between those who can speak English and those who cannot read it; some can communicate orally in English, but lack the formal educational foundation to be able to read.

In short, communication does not appear to pose a major problem on the San Carlos Reservation. The total inability of persons to speak or read English is likely to be concentrated in the elderly age groups. These persons are not usually available for labor market activities. Instructions such as are likely to be given to relatively unskilled workers appear to be within the realm of understanding of the San Carlos Apache. Some of the population are obviously capable of utilizing the English language efficiently as evidenced by completion of some of college training. However, the widespread practice of using the Indian language in the home indicates that the ability to com-

municate in English is not as efficient as revealed by respondents. Considerable training in basic communication seems to be required for maximum ability to provide job skills training and, in turn, general labor market participation.

Utilization of the Human Resource on the San Carlos Reservation

The population list used on the San Carlos Reservation contained the names of 2,106 people 16 years of age or older. The list, however, contained the names of some people not on the reservation at the time of the survey. Of the 525 names selected at random from the population list, 390 are believed to be on the reservation. On the basis of this information, it is estimated that 1,565 of the population 16 and over are on the reservation. This constitutes the human resource that is currently available. It should be noted that the people not found had moved off the reservation, were in the military service, or their whereabouts was not known. There may be other residents who have moved back onto the reservation since the list was compiled two years ago. Such persons were not included in the survey; their number, while not known, is not believed to be large.

This section examines the extent to which the human resource is utilized on the San Carlos Indian Reservation. First, attention is given to the labor force participation of the San Carlos population. The discussion of labor force participation will be followed by an examination of unemployment and underemployment.

Labor Force Participation

The San Carlos residents who were interviewed were asked about their work activity during the year prior to the survey and their responses are reported in Table VII. Only 37.5 percent of those interviewed responded that their primary activity in the year prior to the survey was working. Another 1.4 percent of the people have a job but were not at work, and 2.3 percent were looking for work most of the year. These three groups are included in the labor force. The information presented in Table VII suggests that about 40 percent of the population was in the labor force. The San Carlos labor force participation rate is approximately two-thirds of the U. S. labor force participation rate of 59.4 percent.

The difference between the San Carlos labor force participation rate and the U. S. labor force participation rate is large enough to warrant close attention. The well known relationship between age and labor force participation suggests that perhaps the low San Carlos labor force participation rate can be explained by its age distribution.

TABLE VII
MAJOR ACTIVITY MOST OF THE YEAR PRIOR TO THE SURVEY

Activity	Percent
Working	37.5
With a job but not at work	1.4
Looking for work	2.3
Keeping house	28.4
Going to school	16.6
Unable to work	9.5
Retired	2.9
Other	1.4
TOTAL	100.0

N = 349

Table VIII presents the San Carlos age distribution of the population over 16 years of age, along with the U. S. population age distribution. The San Carlos age distribution appears to be considerably younger than the U. S. population. The San Carlos distribution has a greater concentration in each of the three age groups below 40 years of age. The U. S. distribution has a greater concentration in each of the four groups above 39 years of age. The relative youthfulness of the Indian population could result in a higher potential labor force participation rate than for the general U. S. population.

An attempt was made to ascertain the impact of the difference in age distributions on the overall labor force participation rate. An estimate of the overall labor force participation was made under the assumption that the San Carlos population was distributed in the same way that the U. S. population was distributed, but that the age group labor force participation rates on the San Carlos Reservation remained the same. The assumptions of a U. S. age distribution and the San Carlos labor force participation rates by age group yielded a labor force that was slightly smaller than exists at the present time. That is, the youthfulness of the San Carlos population tends to drive

TABLE VIII
AGE DISTRIBUTION: SAN CARLOS AND UNITED STATES
(Percent 16 years of age or older)

Age Group	San Carlos	U. S.
16-19	14.0	8.7
20-29	19.1	17.9
30-39	24.3	20.2
40-49	15.4	18.6
50-59	12.3	14.9
60-69	9.4	11.1
70 and over	5.4	8.5
TOTAL	99.9*	99.9*

N = 350
* Does not sum to 100 percent due to rounding.
Source: U.S. Census of Population, 1960, for U.S. age distribution.

up the potential labor force size. If the population of the San Carlos Reservation was distributed in the same way as the U. S. population, the reservation labor force would be 2.8 percent smaller than it is.

While the differences between overall San Carlos labor force participation and the U. S. labor force participation cannot be explained by differences in the age distributions of the two populations, there is a relationship between age and labor force participation on the reservation. San Carlos labor force participation rates by age group are presented in Table IX. The San Carlos rate is much below the U. S. rate for the 16-19 year old group. The U. S. rate is higher for the 20-29 group, but the San Carlos rate for the 30-39 age group is very close to the U. S. rate. Participation rates for the San Carlos Reservation begin to decline in age groups older than the 30-39 group. This is contrary to the U. S. pattern. The most noticeable difference between the San Carlos participation rates and the U. S. rates is the very low rate prevailing on the San Carlos Reservation for the under 20 group and the over 59 group. The pattern of labor force participation rates on the reservation suggests delayed entry into the labor force and early withdrawal.

The overall labor force participation rate for San Carlos women is 22.7 percent as shown in Table X. This is slightly more than half of the U. S. participation rate for women. The pattern of labor force

TABLE IX
CIVILIAN LABOR FORCE PARTICIPATION RATES:
SAN CARLOS RESERVATION AND UNITED STATES
(Percent by age group)

Age Group	San Carlos	U. S.
16-19	12.2	44.2
20-29	43.3	67.0
30-39	65.9	70.3
40-49	44.4	73.4
50-59	37.2	74.2
60 and over	11.5	29.5
All age groups	39.1	59.4

Source: Manpower Report of the President, 1964, for U.S. rates.

participation rates for women by age group on San Carlos is very much the same as the pattern for the population in general except that the female rates are lower. The pattern is indicative of delayed entry and early withdrawal from the labor force. The rates for the

TABLE X
FEMALE CIVILIAN LABOR FORCE PARTICIPATION RATES:
SAN CARLOS RESERVATION AND UNITED STATES
(Percent by age group)

Age Group	San Carlos	U. S.
16-19	13.0	37.4
20-29	27.8	49.2
30-39	38.6	45.2
40-49	17.7	52.2
50-59	21.7	55.9
60 and over	4.0	17.8
All age groups	22.7	41.5

Source: Manpower Report of the President, 1964, for U.S. rates.

30-39 age group approach that for the United States, but the rates for the 60 and over group and the under 20 group are well below the rates for the country as a whole. Note also, the San Carlos 40-49 group is lower than that of the 50-59 group.

TABLE XI
MALE CIVILIAN LABOR FORCE PARTICIPATION RATES:
SAN CARLOS RESERVATION AND UNITED STATES
(Percent by age group)

Age Group	San Carlos	U. S.
16-19	11.5	51.4
20-29	61.3	88.0
30-39	95.1	97.8
40-49	90.0	96.3
50-59	55.0	92.3
60 and over	18.5	44.2
All age groups	57.6	79.7

Source: Manpower Report of the President, 1964, for U.S. rates.

The San Carlos labor force participation rate for men is 57.6 percent, compared to a U. S. rate of 79.7 percent as shown in Table XI. Thus, the San Carlos rate for males is less than three-quarters of the U. S. male rate. Note that the labor force participation rate for San Carlos males in the 30-39 age group is almost equal to the U. S. rate. The rate for the 40-49 group is also surprisingly close to the U. S. rate. A large difference also exists between San Carlos and the U. S. participation rates in the under 20 and the 60 and over groups. The pattern of participation for San Carlos males appears to be the same as that for women only not as pronounced. The pattern is one of delayed entry and early withdrawal.

In summary, the labor force participation rates for the San Carlos Reservation are below those for the United States. Some of the age groups have labor force participation rates that are surprisingly high. This is especially true for males between the ages of 30 and 49. However, the overall pattern of labor force participation on the San Carlos Reservation indicates that people enter the labor force at a later age and withdraw from the labor force at an earlier age than the population of the United States in general.

Reason for Not Entering the Labor Force

Approximately 60 percent of the San Carlos population 16 years of age or over is not in the labor force. This nonparticipation rate is

substantially higher than the comparable rate for the United States. The nonparticipants can be regarded as those not working and not looking for work; this group comprises a large portion of the total adult population on the San Carlos Reservation.

Those people not working and not looking for work were asked: "If you are not looking for work, what are the reasons you are not looking for work?" The replies to this question are provided in Table XII. As indicated, the most important reason for not seeking employment was family responsibility. Of the seventy-one people listing this reason for not seeking work, all but four were women. Of the women

TABLE XII
REASONS GIVEN FOR NOT SEEKING EMPLOYMENT

Reason	Percent of Those Not in Labor Force*
Believes no work is available	2.6
Couldn't find work	2.7
Lacks necessary schooling, training, or experience	15.4
Employers think too young or too old	1.7
Personal handicap	12.8
Can't arrange for child care	8.7
Family responsibilities	47.7
In school or other training	12.8
Ill health or physical handicap	27.5
Other	8.7
Don't know	2.0

N = 149
* Does not sum to 100 percent due to multiple responses.

listing family responsibilities as a reason for not seeking employment, 76 percent are married and only 3 percent have never been married.

Ill health or physical handicap was listed by 27.5 percent of those not seeking employment as a reason for not seeking work. Those who listed this reason for not seeking work tended to be older than the population in general as shown in Table XIII. This is especially noticeable for men. More than 85 percent of the men who listed this reason for not seeking employment were 50 years of age or older. This suggests that early withdrawal from the labor force may be at least partly attributed to deterioration of health as individuals get older.

TABLE XIII
AGE DISTRIBUTION OF PEOPLE WHO WERE NOT LOOKING FOR WORK DUE TO ILL HEALTH OR PHYSICAL DISABILITY

Age Group	Percent Females	Percent Males
16-19	5.0	4.8
20-29	5.0	0.0
30-39	10.0	9.5
40-49	25.0	0.0
50-59	10.0	28.6
60-69	25.0	28.6
70-79	10.0	19.1
80 and over	10.0	9.5
TOTAL	100.0	100.1*

N = 20 females; 21 males.
* Does not sum to 100 percent due to rounding.

Very few of the respondents said that they did not seek work because they believed no work was available or because they couldn't find work. On the surface these two responses suggest that labor force nonparticipation is not related to the availability of work. The San Carlos respondents did list deficiencies in education, training, or experience as important factors keeping them from looking for work. The people giving this response are indicating that jobs are not available for people with their education and experience. It should be noted that the median years of school completed by those who gave this reason for not seeking employment was nine years. This is equal to the median years of education completed for the San Carlos population. It would appear that to some extent the people listing lack of education, training, or experience for not seeking employment, actually reflect the insufficient demand for workers on the reservation.

Employment Experience of Those Not Usually Employed

Those people who did not work at all during the year prior to the survey were asked: "When did you last work at a regular full- or part-time job or business?" Usable responses were received from 171 San Carlos residents. The responses to this question are provided in Table XIV. Of those who did not work in the year prior to the survey, 87.1 percent have never worked or have not worked for five or more years.

The most important subgroup of those that did not work in the year prior to the survey is composed of those who have never worked.

More than 75 percent of those who did not work in the previous year have never worked. Included in this group are the young people who are enrolled in school and who account for 12 percent of the

TABLE XIV
TIME OF LAST EMPLOYMENT OF THOSE NOT IN LABOR FORCE

Time	Percent Responding
Within past twelve months	2.9
One to two years ago	4.1
Two to three years ago	2.9
Three to four years ago	2.3
Four to five years ago	0.6
Five or more years ago	11.7
Never worked	75.4
TOTAL	99.9*

N = 171
* Does not sum to 100 percent due to rounding.

129 people who did not work in the year previous to the survey. Many of the students probably will eventually enter the labor force; but this is not the case for the nonstudents who have never worked,

TABLE XV
MARITAL STATUS OF THOSE WHO NEVER WORKED
(Nonstudents)

Marital Status	Percent Female	Percent Male
Married	69.4	45.5
Widowed	11.8	18.2
Divorced	4.7	18.2
Separated	5.9	0.0
Never-married	7.1	18.2
Info. not available	1.2	0.0
TOTAL	100.1*	100.1*

N = 85 females; 22 males.
* Does not sum to 100 percent due to rounding.

and for those people who have not worked for five or more years. This group appears to be permanently isolated from the labor market. Their absence from the labor force cannot be explained by short-run factors. It is most likely that their lack of participation has become institutionalized. That is, it would appear that certain groups are not expected to participate in the labor market.

The distribution of those nonstudents who have never worked is presented in Table XV. Of the 107 nonstudents who have never worked, 85 are women. Only a small portion of those women who have never worked have never been married. In the case of women, marital obligations may very well discourage labor force participation.

TABLE XVI

AGE DISTRIBUTION OF THOSE WHO NEVER WORKED

Age Group	Percent Female	Percent Male
16-19	2.4	9.1
20-29	10.6	9.1
30-39	20.0	13.6
40-49	24.7	0.0
50-59	18.8	31.8
60-69	14.1	9.1
70 and over	9.4	27.3
TOTAL	100.0	100.0

N = 85 females; 22 males.

A surprisingly large percentage of the men who never worked are married. This is contrary to expected behavior. Family obligations should encourage most males to enter the labor force at one time or another.

The age distribution of those who have never worked is presented in Table XVI. Age does not appear to be an important explanation of the failure of women to enter the labor market. Women from all age groups are among those who never worked. Age does appear to be related to the failure of men to participate. Those men who have never worked tend to be older than the median age of the San Carlos population in general. Of those males who never worked, 68 percent are 50 years or older and 27 percent are 70 years of age or older. This group of males is not likely to be enticed into the labor force after all their years of never working.

Education is also related to the failure to participate in the labor market. Of those females who have never worked, the median years of school completed is seven; for men, the median years of school completed is five years. These levels of educational attainment are below the average for the reservation as a whole. In the case of men, the relatively low level of educational attainment is related to the age distribution of those that have not worked for five or more years. The tables suggest that marital status is the most important factor discourging female participation. In the case of men, age appears to be the most important factor.

The characteristics of those who have not worked for five or more years are much the same as the characteristics of those who have never worked. Only twenty people responded that they have not worked for five or more years and none are students. Half of them are women. Almost all of the people in this group were married, as portrayed in Table XVII.

TABLE XVII
MARITAL STATUS OF THOSE NOT EMPLOYED FOR FIVE OR MORE YEARS
(Nonstudents)

Marital Status	Percent Female	Percent Male
Married	80.0	70.0
Widowed	10.0	20.0
Divorced	0.0	0.0
Separated	0.0	0.0
Never-married	10.0	10.0
TOTAL	100.0	100.0

N = 10 females; 10 males.

Most of the males not employed for five or more years were 50 years of age or over. The specific breakdown is provided in Table XVIII. The age distribution of women is more dispersed. The educational attainment of the men in this group is below the educational attainment for the San Carlos population in general. This is consistent with the age distribution of men in this group.

Those people who were not usually employed during the year prior but had worked at some time in the past were asked why they left their last job. The responses to this question are provided in

TABLE XVIII
AGE DISTRIBUTION OF THOSE NOT EMPLOYED FOR FIVE OR MORE YEARS

Age Group	Percent Female	Percent Male
16-19	0.0	0.0
20-29	10.0	0.0
30-39	60.0	0.0
40-49	10.0	10.0
50-59	0.0	10.0
60-69	20.0	30.0
70 and over	0.0	50.0
TOTAL	100.0	100.0

N = 10 females; 10 males.

Table XIX. Most frequently, a respondent replied that he left his last employment for personal, family, or school reasons. Retirement or old age was the next most frequent response. Only 6.7 percent responded that they had left their last employment because it was a seasonal job that was complete, and only 4.4 percent responded that they had left their last job because a temporary job was completed. No one responded that he left his last employment because of slack work or business conditions. The responses to this question suggest

TABLE XIX
REASON FOR LEAVING LAST JOB

Reason	Percent Responding
Personal, family, or school	31.1
Health	11.1
Retirement or old age	24.4
Seasonal job completed	6.7
Slack work or business conditions	0.0
Temporary nonseasonal job completed	4.4
Unsatisfactory work conditions	2.2
Other	20.0
TOTAL	99.9*

N = 45
* Does not sum to 100 percent due to rounding.

that the reasons for withdrawal are primarily related to nonmarket factors. In relatively few cases were the individuals driven out of the labor market due to cessation of employment.

Unemployment

The first question on the Indian Manpower Resource Study questionnaire asks the respondent about his usual activity during the year prior to the survey. This question attempts to ascertain the level of employment, labor force participation, and unemployment on the basis of the respondent's recollection of his usual activity over a one-year span. Bias can enter into the response to this question due to the interpretation of the question. That is, a person who worked two or three months may think that he worked longer or may regard two or three months work as working most of the year. Another example of difficulty in interpretation arises from the meaning of looking for work most of the year. A person may look for work one day each month. It is not clear how this person would respond to the questionnaire. Nevertheless, responses to the question should indicate labor force participation and employment reasonably well. Measures of unemployment are likely to be unusually low since it is not likely that individuals will spend most of the year in the process of searching for employment. If employment is not found in a short period of time, individuals will most likely withdraw from the labor force. This will tend to keep the unemployment rate at a low level.

An estimate of unemployment can be made on the basis of the activity during the past year. The employed include those who have a job but were not at work. The unemployed are those who looked for work. Those who are not looking for work because they believe no work is available are regarded as not being in the labor force rather than being unemployed. Of those in the labor force, 5.8 percent responded that they looked for work most of the year. Another 3.7 percent responded that they were with jobs but were not usually at work. Those people with jobs but not at work most of the year were most likely in jobs related to copper mining. The San Carlos Reservation is located in the general vicinity of Globe-Miami copper mining district. The workers in the mines in that area were on strike for most of the year. Since those people with a job but not working were idled because of strike, they are counted as being employed

rather than unemployed. Thus, the total unemployment rate for the San Carlos Reservation is 5.8 percent.

The characteristics of the usually unemployed are not very different from the characteristics of the San Carlos population in general. Half of the people who reported that they were usually unemployed were in the 30-39 age group. Educational attainment does not appear to be related to unemployment status, nor does marital status. The data in the survey did not offer much insight into the factors that contribute to unemployment.

The unemployment statistics in the previous section appear to understate the extent of unemployment. The second question on the survey asked the respondents how many months they had worked during the year prior to the survey. Of the respondents, 51.3 percent replied that they did no work at all. These respondents were asked if they had looked for work during the year. The answers to this question are presented in Table XX. The table indicates that 17.4 percent of those who did not work had looked for work at some time during the year. More than half of those who looked for work would have been willing to accept either part- or full-time employment. Those people who did not look for work were asked why they did not look for work, and 5.3 percent responded that they believed no work was available. In total then, 22.4 percent of those who did not work

TABLE XX

PERCENTAGE OF THOSE NOT WORKING WHO ARE LOOKING FOR WORK

(By type of work)

Category	Percent
Full-time	4.4
Part-time	3.3
Both	9.4

N = 180

at all during the year prior to the survey either looked for work or would have looked for work if they believed work was available. This unemployment rate contrasts sharply with the results obtained from an evaluation of the responses to question one. There appears to be a substantial reservoir of unemployed on the San Carlos Reservation.

Those people seeking employment sought information about employment at various places as shown in Table XXI, but most fre-

quently directly contacted potential employers. This is contrary to the pattern that emerged on the other two reservations in Arizona. The high propensity to contact employers may reflect the somewhat lesser degree of isolation that characterizes the San Carlos Reservation. The BIA is the next most frequently used source of information about employment opportunities. The proportion of people contacting the Arizona State Employment Service is unusually low when one considers that there is a full-time office in San Carlos, and it is operated by a well known member of the community. As expected, the use of want ads was not extensive.

TABLE XXI
SOURCES CONTACTED ABOUT WORK INFORMATION BY THOSE LOOKING FOR WORK IN PREVIOUS YEAR

Source	Percent*
Bureau of Indian Affairs	41.4
Arizona State Employment Service	31.0
Private employment service	31.0
Employer directly	51.7
Friends or relatives	27.6
Placed or answered ads	0.0
Other	17.0

N = 29
N = 29
* Does not sum to 100 percent due to multiple responses.

Those people unsuccessful in looking for a job were asked why they thought they had difficulty and the responses are reported in Table XXII. Most frequently people attribute their lack of success in getting a job to the unavailability of jobs. Lack of training and education appear to be important on the San Carlos Reservation, as is transportation.

Underemployment

Low labor force participation rates and high unemployment rates provide only a partial description of the activity of the San Carlos population. Either of these measures taken by itself is misleading. Even a combination of these measures fails to describe manpower utilization on the San Carlos Reservation since they fail to fully

TABLE XXII

REASONS FOR DIFFICULTY IN FINDING A JOB BY THOSE NOT WORKING BUT LOOKING FOR WORK

Reasons	Percent*
No jobs available	43.3
Age—too old, too young	23.3
Lack necessary skill or experience	20.0
Lack of necessary education or training	26.7
Health problems, physical disability	6.7
Personal problems—police record, bad debts	0.0
Transportation	20.0

N = 30

* Does not sum to 100 percent due to multiple responses.

account for the irregularity of employment and the fact that in many cases employment is not on a full-time basis. The following section provides an overall view of the important factors combined.

On the San Carlos Reservation, 70.3 percent of the working-age women and 30.9 percent of the men did not work at all. Of those that did work, only a small proportion worked ten to twelve months. The distribution of respondents by number of months worked is presented

TABLE XXIII

DISTRIBUTION OF PEOPLE BY MONTHS WORKED AND SEX

Months Worked	Percent of Population	Percent Female	Percent Male
0	51.3	70.3	30.9
1 - 3	14.1	9.2	19.4
4 - 6	7.2	6.5	7.9
7 - 9	5.7	4.3	7.3
10 - 12	21.6	9.7	34.6
TOTAL	99.9*	100.0	100.1*

N = 185 females; 165 males.

* Does not sum to 100 percent due to rounding.

in Table XXIII. The table shows that 14 percent of the women on the reservation work seven months or more. Men are likely to work year-round. Of the men, 34.6 percent worked ten to twelve months and an additional 7.3 percent worked seven to nine months. As shown

in Table XXIV, 56.2 percent of those who worked, worked more than half of the year. It should be noted that 29 percent of the people that were employed during the year were employed for three months

TABLE XXIV
DISTRIBUTION OF THOSE WHO DID SOME WORK
BY NUMBER OF MONTHS WORKED

Months Worked	Percent
1 - 3	29.0
4 - 6	14.8
7 - 9	11.8
10 - 12	44.4
TOTALS	100.0

N = 169

or less. The San Carlos data suggest that employment is not likely to be year-round employment. A large number of people who work, work only a part of the year.

The people who reported that they had done some work in the year prior to the survey were asked whether they worked year-round,

TABLE XXV
USUAL TYPE OF EMPLOYMENT

Type of Employment	Percent of Workers
Year-round	52.1
Seasonal	27.8
Irregular	20.1
TOTAL	100.0

N = 169

on a seasonal basis, or irregularly. The response to this question is provided in Table XXV. As the table indicates, 52.1 percent of the people who worked responded that they worked year-round. In order for this response to be consistent with the data in Table XXIV, some of the people who worked from seven to nine months must consider their employment to be year-round. Table XXV reveals the fact that 20 percent of those who worked in the year prior to the survey are

employed on a irregular basis. An additional 27.8 percent of those who are employed, are employed on a seasonal basis. The pattern of seasonal employment is presented in Table XXVI. Seasonal employment reaches its highest level in the summer when many of the San Carlos Apaches work in agricultural employment. This employment

TABLE XXVI
DISTRIBUTION OF SEASONAL EMPLOYMENT

Season	Percent of Seasonal Workers Employed
Spring	23.1
Winter	6.2
Fall	21.5
Summer	49.2
TOTAL	100.0

N = 65

may be on or off the reservation. A large number of San Carlos residents work off the reservation when agricultural employment opportunities exist.

The number of months worked is related to age. Table XXVII

TABLE XXVII
AGE DISTRIBUTION BY NUMBER OF MONTHS WORKED
(Percent)

	Months Worked				
Age Group	0	1-3	4-6	7-9	10-12
16-19	14.9	30.6	16.0	5.0	2.7
20-29	14.4	32.7	40.0	25.0	13.3
30-39	17.7	6.1	16.0	35.0	52.0
40-49	14.4	12.2	16.0	20.0	18.7
50-59	14.4	12.2	12.0	10.0	8.0
60-69	13.8	6.1	0.0	5.0	5.3
70 and over	10.5	0.0	0.0	0.0	0.0
TOTAL	100.1*	99.9*	100.0	100.0	100.0
Number in each group	181	49	25	20	75

* Does not sum to 100 percent due to rounding.

shows the relationship between age and employment. The table shows that half of the workers who worked ten to twelve months were in the 30-39 age group. Only a very small proportion of those who worked ten to twelve months were below 20 years of age or above 59 years of age. The 30-39 age group is also the most important age group for those working seven to nine months. Those people working one to six months are likely to be younger. It would appear that a large proportion of the part-year workers are young. The workers who work more than half the year tend to be in the age bracket centering around the 30-39 group.

Marital status is also related to the number of months worked in the year prior to the survey. Married females were not likely to be employed at all as shown in Table XXVIII. Most of those who are employed are not employed year-round. Married men, on the other hand, are likely to be employed; however, a surprisingly high 21.8 percent of married men reported that they did not work in the year prior to the survey. More than half of the married men worked ten months or more. Never-married females were more likely to be em-

TABLE XXVIII

DISTRIBUTION OF MONTHS WORKED FOR MARRIED SAN CARLOS

Months Worked	Percent Female	Percent Male
0	77.4	21.8
1 - 3	4.7	9.9
4 - 6	4.7	6.9
7 - 9	2.8	9.9
10 - 12	10.4	51.5
TOTAL	100.0	100.0

N = 106 females; 101 males.

ployed than married females as shown in Table XXIX. Only a small portion of the nonmarried females were employed ten months or more. Never-married males were less likely to be employed and less likely to be employed more than three months as compared with married males.

Marital commitments appear to increase the labor force participation of men and reduce the participation of women. The relationship between marital status and the number of months worked can be seen

TABLE XXIX
DISTRIBUTION OF MONTHS WORKED FOR
NEVER-MARRIED SAN CARLOS

Months Worked	Percent Female	Percent Male
0	56.5	37.8
1 - 3	15.2	42.2
4 - 6	10.9	8.9
7 - 9	6.5	2.2
10 - 12	10.9	8.9
TOTAL	100.0	100.0

N = 46 females; 45 males.

in another perspective by looking at the data presented in Table XXX. This reveals that more than 90 percent of all males who worked ten months or more are married. More than 60 percent of the women who worked ten to twelve months are married.

TABLE XXX
MARITAL STATUS OF THOSE WHO WORKED TEN TO TWELVE MONTHS

Marital Status Marital Status	Percent Female Percent Female	Percent Male Percent Male
Married	61.1	91.2
Widowed	0.0	0.0
Divorced	0.0	0.0
Separated	11.1	1.8
Never-married	27.8	7.0
TOTAL	100.0	100.0

N = 18 females; 57 males.

Hours Worked

When residents of the San Carlos Reservation are employed, a relatively large number of them work fewer than 40 hours per week (Table XXXI). More than 23 percent of all those who worked are employed for less than 40 hours per week when they are employed. Much of this can be attributed to personal preference and the fact that the ordinary workweek involves less than 40 hours work. Nearly 2 percent of those employed perform their tasks for more than 60

TABLE XXXI
HOURS PER WEEK USUALLY WORKED BY EMPLOYED SAN CARLOS

Hours	Percent of Total
1 - 14	5.3
15 - 29	5.3
30 - 34	5.3
35 - 39	7.6
40	67.3
41 - 48	5.3
49 - 59	2.3
60 or more	1.8
TOTAL	100.2*

N = 171
* Does not sum to 100 percent due to rounding.

hours per week, and a sizable percentage work in excess of 40 hours. Two percent are on the job from 49 to 59 hours during a given week. Another 5 percent work between 41 and 48 hours per week. Long hours are characteristic of some jobs. Many jobs requiring such long hours are likely to be found in cattle herding and related ranch or agricultural work.

Industry and Occupational Experiences

Industry Experiences

Table XXXII makes it clear that the San Carlos Apache has had limited experience in industry. The inquiry was limited to experiences of the last five years on the assumption that any attachment prior to that period would be largely lost and of little importance in work performed at present. Industries identified include both on- and off-reservation operations since some of the tribesmen commute to adjacent communities to earn a livelihood. Employment experiences by industry class were limited to 193 respondents since the remainder generally had not worked in the past five years. Additionally, it is recognized that multiple responses are possible since a particular individual may have worked in several different industry classes over the past years.

Government employment is the single most important classification for the San Carlos Indians. Work is provided at the three govern-

mental levels, but federal agencies are by far the most important. State government is the least important. Local governmental jobs are wholly tribally-operated enterprises. Roughly 54 percent of industry experiences over the past five years are concentrated in the activities of the three levels of government. The finding of this section is highly consistent with the report of actual on-reservation employers presented early in the chapter.

Nearly 17 percent of industry experience is in the agricultural, forestry, and fisheries class. Industry experience has been principally cencentrated in agricultural production due largely to the interest of

TABLE XXXII

SAN CARLOS APACHE EMPLOYMENT BY INDUSTRY CLASS

(Number and percent)

Code	Industry	Number		Percent of Total
	AGRICULTURE, FORESTRY, AND FISHERIES			
01	Agricultural production	29		
08	Forestry	3		
	Subtotal		32	16.6
	MINING			
10	Metal mining	2		
14	Mining and quarrying of nonmetallic minerals, except fuels	3		
	Subtotal		5	2.6
	CONTRACT CONSTRUCTION			
15	Building construction—general contractors	2		
16	Construction other than building—general contractors	2		
	Subtotal		4	2.1
	MANUFACTURING			
23	Apparel and other finished products made from fabrics and similar materials	1		
24	Lumber and wood products, except furniture	5		
25	Furniture and fixtures	1		
	Subtotal		7	3.6
	WHOLESALE AND RETAIL TRADE			
53	Retail trade—general merchandise	12		
55	Automotive dealers and gas service stations	3		
58	Eating and drinking places	2		
	Subtotal		17	8.8

TABLE XXXII (continued)

Code	Industry		Number	Percent of Total
	SERVICES			
72	Personal services		1	
73	Miscellaneous business services		1	
75	Auto repair, services and garages		3	
80	Medical and other health services		2	
82	Educational services		1	
86	Nonprofit membership organizations		2	
88	Private households		13	
		Subtotal	23	11.9
	GOVERNMENT			
91	Federal government		82	
92	State government		3	
93	Local government		20	
		Subtotal	105	54.4
TOTAL			193	100.0

N = 193

the people in livestock and related pursuits. Some experience in forestry is also apparent.

Services provide the basic industry experience for nearly 12 percent of the population. Some work experiences exist in auto repair and educational services, but primary activity is in domestic work in private households.

Wholesale and retail trade is a category of activity, past and current, for nearly 9 percent of the population. General merchandising work in trading posts and tribally-owned stores accounts for most of the industry attachment.

Manufacturing, mining, and contract construction industries combined account for roughly 8 percent of population industry attachments. Mining has offered limited employment to the San Carlos Indian. Contract construction is also relatively unimportant, signifying the lack of building activity on the reservation as well as a lack of involvement in off-reservation construction. Manufacturing activity on the reservation is not extensive and there appears to have been little desire for workers to penetrate off-reservation industries, as well. It is apparent that the off-reservation industries have not included

San Carlos Apaches in their activities to any significant degree. This is the case despite the mining activities in adjacent communities. A further refinement of Apache work experience is permitted by a review of occupations at which the tribal members have worked during the past five years.

Occupational Experiences

The *Dictionary of Occupational Titles* was utilized to categorize the nature of industry work performed by the San Carlos Apache. The occupational experiences of the reservation Indians are revealed in Table XXXIII on the basis of 193 responses.

It is obvious that services account for the majority of specific occupational involvement on the part of the Apache with nearly one-third (32.6 percent) of all experiences confined to the category. Most work has been performed in private homes as domestics. Food and beverage service in restaurants and inns also accounts for much of their experiences. Protective service refers to policemen and other security-related work. In general, the service occupations are those that require little, if any, training. The normal types of work performed by persons in the occupations mentioned depend largely on the level of economic activity prevailing in areas immediately adjacent to the reservation. A high level of economic activity enhances the Indian's ability to obtain low labor market entry types of work.

Farming and related occupations account for 18 percent of occupational experiences of the past five years. Animal farming occupations are by far the most important. Cattle raising is considered the most honorable of all work to Apache males. The desire to raise cattle is foremost in the list of occupational preferences. It is in operations related to cattle raising that the San Carlos Apache Tribe prefers to provide work opportunities for its people. Plant farming is generally related to efforts to provide feed for cattle operations. Very little activity is oriented toward commercial vegetable farming.

Nearly 17 percent of the working population, primarily men, have occupational experiences in structural work. Much of the activity in this category has been in excavating, grading, and paving of roads. Construction has also been mentioned as an occupational category in which some Indians have performed work. Such tasks as carpentry and painting are examples of experiences in this category.

Clerical and sales occupations were identified by nearly 10 percent

TABLE XXXIII
SAN CARLOS APACHE EMPLOYMENT BY OCCUPATIONAL TITLE
(Number and percent)

Code	Description	Number		Percent of Total
	PROFESSIONAL, TECHNICAL, AND MANAGERIAL OCCUPATIONS			
00, 01	Occupations in architecture and engineering	4		
07	Occupations in medicine and health	1		
09	Occupations in education	4		
11	Occupations in law and jurisprudence	2		
18	Managers and officials, not elsewhere classified	2		
19	Miscellaneous professional, technical, and managerial occupations	4		
	Subtotal		17	8.8
	CLERICAL AND SALES OCCUPATIONS			
20	Stenography, typing, filing, and related occupations	8		
21	Computing and account—recording occupations	4		
24	Miscellaneous clerical occupations	1		
28	Salesmen, salespersons—commodities	2		
29	Merchandising occupations, except salesmen	4		
	Subtotal		19	9.8
	SERVICE OCCUPATIONS			
30	Domestic service	22		
31	Food and beverage preparation and service	11		
32	Lodging and related service occupations	8		
35	Miscellaneous personal service occupations	10		
36	Apparel and furnishings service occupations	1		
37	Protective service occupations	4		
38	Building and related service occupations	7		
	Subtotal		63	32.6
	FARMING, FISHERY, FORESTRY, AND RELATED OCCUPATIONS			
40	Plant farming occupations	8		
41	Animal farming occupations	20		
42	Miscellaneous farming and related occupations	4		
44	Forestry occupations	3		
	Subtotal		35	18.1
	PROCESSING OCCUPATIONS			
51	Ore refining and foundry occupations	1		
	Subtotal		1	0.5

TABLE XXXIII (continued)

Code	Description	Number		Percent of Total
	MACHINE TRADE OCCUPATIONS			
60	Metal machining occupations	1		
62, 63	Mechanics and machinery repairmen	4		
66	Wood machining operations	1		
	Subtotal		6	3.1
	BENCH WORK OCCUPATIONS			
78	Occupations in fabrication and repair of textiles, leather, and related products	3		
	Subtotal		3	1.6
	STRUCTURAL WORK OCCUPATIONS			
85	Excavating, grading, paving, and related occupations	14		
86	Construction occupations, not elsewhere classified	15		
89	Structural work occupations, not elsewhere classified	3		
	Subtotal		32	16.6
	MISCELLANEOUS OCCUPATIONS			
90	Motor freight occupations	1		
91	Transportation occupations, not elsewhere classified	8		
92	Packaging and materials handling occupations	2		
93	Extraction of minerals	3		
94	Occupations in logging	2		
95	Occupations in production and distribution of utilities	1		
	Subtotal		17	8.8
TOTAL			193	100.9*

N = 193

* Does not sum to 100 percent due to rounding.

as areas of specific experience. Secretarial types of jobs are the most important, but salesmen and general merchandising occupations are included in the range of Apache experiences.

Professional, technical, and managerial occupational experiences are possessed by roughly 9 percent of the tribe. Most of such experiences are the result of tribal and other governmental operations on the reservation. For example, occupations in law refer to the tribe's own need for judges. Managers and other officials work in tribal

businesses or are hired to serve in the tribal government. Occupations in medicine and education stem from the location of the Indian Hospital and public school system. The category is important as a training ground providing experiences necessary to penetrate tribal or private enterprises likely to be developed over time.

The processing, machine trade, and bench work occupations make it apparent that little occupational experience has been received in manufacturing and mining industries. Combined, only about 5 percent of the working-age population has worked at occupations in such industries.

Miscellaneous occupational experiences such as motor freight, transportation, and logging account for nearly 9 percent of the working-age population. Most opportunities in the classification are limited to males. Obviously, San Carlos Apaches have had limited occupational experiences. Experiences such as have been revealed indicate that most activity is limited to jobs normally described as labor force entry level tasks. Few have risen above the relatively unskilled occupations. Economic development of the reservation will largely depend upon measures undertaken to retrain the San Carlos Apache. Past attempts to attract industry on the basis of a large surplus of labor have been unsuccessful. Employers that may consider locating on the San Carlos Reservation must require only relatively unskilled common labor or else be prepared to undertake extensive training programs. The existence of a relatively untrained and undisciplined labor force in view of the prevailing technologies offers little incentive to employers to locate plants on the reservation. A significant investment in the human resource is required. Relocation to off-reservation areas seems imperative for development of the Apache himself. Tribesmen are currently attempting to develop their cattle industry in order to preserve tribal life on the reservation.

Location of Present Job. Apaches reporting that they usually worked during the past year were asked "Is your present (or usual) job located on your reservation?" On the basis of 168 responses, it was learned that only 16 percent work off the tribal lands. Eighty-four percent work in occupations located on the reservation. It appears that few Apaches seek work off the reservation, or they are largely unsuccessful if they do. The general way that workers learn of job opportunities is from friends or relatives. The San Carlos Apache people have few contacts with off-reservation labor markets

and, as a consequence, knowledge of opportunities for which they may qualify is limited.

Source of Learning Present Job. It has already been demonstrated that industry and occupational experiences are limited. Respondents who usually worked during the past year were asked to reveal where they learned to perform their present or usual job. Table XXXIV illustrates the source of specific job training; roughly 65 percent of persons usually working were taught to perform their tasks on the job by employers. The industry classifications and occupational categories previously described make it obvious that training such as is required is minimal. Employers normally must train an employee to perform his specific job. Most work, regardless of standardization or meniality of tasks is expected to be done in a particular fashion by those in charge of operations. All workers will normally undergo some training despite previous experiences.

TABLE XXXIV
SOURCE OF TRAINING TO PERFORM JOB

Source	Percent
Taught by employer	64.7
Government training program	19.8
Armed services	0.6
Formal education	7.8
Other	7.2
TOTAL	100.1*

N = 167
* Does not sum to 100 percent due to rounding.

Government training programs were identified by nearly 20 percent of workers as the primary source of learning their present jobs. Some responses undoubtedly were based on the fact that individuals work for government agencies and were taught their task on the job. It is suspected that many who said they had government training actually were trained by employers on the job. Nevertheless, some government training takes place as is evidenced by the existence of the Job Corps Center on the reservation.

The Armed Forces are of little value to the San Carlos Apache in specifically preparing him for civilian employment. Formal education was cited by nearly 8 percent as the source of learning present

jobs. This is not unusual since secretarial and educational types of jobs are highly dependent upon formal institutional training. The acquiring of typing and shorthand skills, for example, requires an extended training period that may be too long for employers to assume.

Roughly 7 percent of workers revealed some other source of learning present jobs. It is likely that many were taught by friends and relatives. This is particularly the case in some service jobs as well as the usual agricultural tasks. Self-instruction is also highly probable for many of the jobs performed by Apache men and women.

Union organization is not a very strong factor in job-related experiences of the tribe. Approximately 2 percent of the working-age population reported union membership. Most of these belong to construction unions as laborers but as such have not been exposed to skills training in union-conducted programs. There appears in the past to have been no effort to enlist Indians in union apprenticeship programs, and the apparent lack of construction activity on the reservation is likely to preclude such an effort in the immediate future. Organizing campaigns are virtually precluded from reservation lands, and Apache integration in the general off-reservation labor market has been so slight as to practically eliminate union membership altogether.

Skills Training Without Subsequent Job Experience. Respondents were asked if they had received training for occupations, but have been unsuccessful in obtaining work for which they had been trained. On the basis of 344 responses, nearly 19 percent stated they had been trained to work at jobs, but were later unable to take advantage of the skills acquired. Several separate occupations were specified and reported in Table XXXV.

Several others, not listed in the table, responded that training was received, but failed to specify the type. Such responses are eliminated from the table, but are reflected in the percentage mentioned. It is obvious that some of the government training programs as well as college training are reflected. Training as draftsman, beautician, and tractor operator was gained in specific programs, but the nature of the reservation renders such training almost useless. The same is also true with college trained persons in nursing, business administration, and education who do not migrate to off-reservation firms to obtain jobs. It is not feasible to train persons for certain occupations unless the trainees are willing to break away from their tribal homes. Such training is likely never to be utilized because of the lack of demand for such skills on reservations. On the other hand, there are a few

TABLE XXXV
TRAINING NOT RESULTING IN JOBS
(Number)

Type of Training	Frequency
Miner	1
Welder	13
Artist	1
Carpenter	2
Housekeeper	1
Home economics	3
Drafting	1
Clerk-typist	6
Shipping clerk	2
Radar (Armed Forces)	2
Handicrafts	1
Waitress	1
Tractor operator	1
Office administration	2
Fiber glass worker	1
Beautician	1
Electrician	2
Maintenance	1
Nursing	3
Machine operator	1
Teacher	1
Mechanic	2
Policeman	1
Bus and truck driver	2
Ward attendant	1
Plumber	1
Painter	1
Cabinet maker	1
TOTAL	56

skilled persons available on the San Carlos Reservation should business development proceed to the point where they are needed. Some of the training reported by respondents merely reflected some of the past jobs held and the termination of the job left the individual without a reasonable alternative in the same type of activity. In short,

knowledge of a skill is of little or no value unless an individual relocates to areas where such skills are demanded.

Sources of Income

Knowledge of incentives to participate in the labor force as well as to remain on the reservation may be gained by a review of sources and amount of earned and unearned income. Income information also permits one to comment on the poverty level of living prevailing among reservation Indians. In this section, income data derived from the sample will be presented in the form of individual and family income, refined to reveal the sources from which it is received. Also, the data are presented by age, sex, and educational attainment level. The latter permits conjecture regarding the influence education has had on the economic well-being of the population. Data presented are on the basis of individual responses to separate questions revealing their own income by category as well as their estimates of family income. Possible weaknesses are recognized since responses were made on the basis of recall without benefit of records.

Earned and Unearned Income

Respondents were asked two different questions for the purpose of learning the amounts of both individual and family incomes. Persons were first asked, "What was *your* total income in 1967?" Later in the interview the individual was also asked, "What was the total monetary and non-monetary income of *your* family in 1967?" The intent of the latter question was to attempt to learn the dollar value of all income received, both real and money. The results are illustrated in Table XXXVI.

Income received by individuals considered of working-force age was not extensive. Approximately 84 percent of the 307 respondents revealed annual incomes of less than $3,000. Nearly 15 percent were without income during the calendar year. It is probable that a significant proportion were concentrated in the 16-19 age grouping and they were generally in school most of the year. The same case cannot be made for the remaining groups. Roughly 31 percent of the population received $1-499 the entire year. Median annual income for all individuals of working-force age is between $500-999. Close to 18 percent received income ranging from $1,000-1,999 and 6 per-

cent reported receipts totalling $2,000-2,999. Incomes of over $3,000 annually may be considered as affluent in terms of on-reservation individual reference groups. Only 10 percent received $3,000-4,999 and another 6 percent reported between $5,000-9,999. Individuals with income amounting to $10,000 or more constitute only one-third of one percent.

TABLE XXXVI
INDIVIDUAL AND FAMILY INCOME

Amount (Dollars)	Individual (Percent)	Family Unadjusted (Percent)	Family Adjusted (Percent)
0	14.7	N.A.	N.A.
1 - 499	30.9	33.1	33.8
500 - 999	14.7	10.0	11.4
1,000 - 1,999	17.9	16.9	16.0
2,000 - 2,999	5.9	12.1	11.4
3,000 - 4,999	9.8	17.2	15.5
5,000 - 9,999	5.9	9.7	10.5
10,000 - and over	0.3	1.0	1.4
TOTAL	100.1*	100.0	100.0

N = 307 individual; 290 unadjusted family; 219 adjusted family.
* Does not sum to 100 percent due to rounding.

Family Income. Family income is reported in two separate categories with one being adjusted, and the other not adjusted. The adjusted category takes account of the method used in sample selection. There was a greater probability that more individuals from large families than from the smaller ones were likely to appear in the sample. The adjusted column merely reflects the dropping of multiple family member response from the calculation. A single member was retained in the calculation. It is obvious that the changes observed between the adjusted and the unadjusted columns are slight.

Median family income on the San Carlos Reservation is in the $1,000-1,999 range for both categories. Median family income is higher than median individual income; the obvious reason for this is sharing among family members. It is also apparent that more than one of the family members is involved in generating the wherewithal to maintain the family unit. It is likely that the responsibility extends

beyond the immediate family of husband, wife, and dependent children because of the extended family tradition.

Even with income sharing, only 1 percent of families received $10,000 or more in 1967. Roughly 10 percent fell in the $5,000-9,999 category and another 16-17 percent were in the $3,000-4,999 income grouping. Approximately 72 percent of all families received incomes of less than $3,000 in 1967. It is apparent that several members of any given family are required to work at low paying jobs on either a full-time or a seasonal basis or, at the very least, have access to sources of unearned income. Transfer payments account for a significant proportion of total Indian income received. In the absence of unearned income, the reservation dweller would experience even lower individual and family incomes than those reported in Table XXXVI.

Non-Money Income. Indians are often characterized as living in a semi-barter society. It is often stated that they supplement incomes by hunting and fishing, by growing vegetables, and by bartering. An attempt was made to determine the extent of such activity on the San Carlos Reservation. Respondents were asked: "Did you receive any non-money income last year?" An arrangement of possible replies was provided, but also the interviewee was asked if there were sources of income other than those specifically mentioned. Information received from 333 responses is illustrated in Table XXXVII.

TABLE XXXVII
NON-MONEY INCOME SOURCES

Source	Percent
Homegrown and consumed agricultural products	0.6
Homemade clothing	0.9
Goods exchanged for other goods	0.3
Other barter sources	7.8

N = 333

A few of the San Carlos Apaches raise and consume vegetables. Generally, the nearly 1 percent of the population so engaged raise corn to supplement limited incomes. In 1938, the Tribal Council authorized the assignment of two-acre plots of irrigable land to individuals for the specific purpose of encouraging subsistence gardens. It is obvious that very few currently raise vegetables to enrich and supplement their diet.

A few Indians make all or some of their own clothing. Roughly 1 percent allocate some of their time to dressmaking. The exchange of goods for other goods is an activity that seems even less popular than gardening and dressmaking. Only about one-third of one percent disclosed such an activity.

Almost 8 percent of respondents listed other barter sources as a means for obtaining non-money income. No elaboration on such activity was obtained. It may well be that hunting animals accounts for a significant proportion of some individuals' time in a year.

Despite the response that non-money income was obtained, the monetary equivalent of such income was not deemed substantial by respondents. Table XXXVIII provides the estimated value of non-money income received. Approximately 8 percent, excluding those

TABLE XXXVIII

MONETARY EQUIVALENT OF NON-MONEY INCOME

Income (Dollars)	Percent
0	92.2
1 - 499	7.6
500 - 999	0.3
1,000 or over	0.0
TOTAL	100.1*

N = 331

* Does not sum to 100 percent due to rounding.

earning nothing, valued their non-money income at less than $500 per year. Only about one-third of one percent considered their efforts added between $500-999 to family well-being. Nevertheless, efforts to generate supplementary income are not insignificant in terms of median individual or family income. It is possible that in some cases non-money income is as valuable in dollars as total money income received. It is clear that not many make an effort to generate the additional income that could be obtained through efforts at raising a garden.

After considering both money and non-money income, earned or unearned, it is obvious that San Carlos Apache families are economically poor relatives to the general U. S. population. Median family income for the United States was $7,436 in 1966. In 1967, it amounted to between $1,000-1,999 for the San Carlos Apache. The smaller

income received was also distributed over larger families dependent upon it for subsistence.

Sources of Individual Income

The various sources of individual income are illustrated in Table XXXIX. Information contained in the table was obtained on the basis of a question asked: "What were the sources of income received by you in the last twelve months?" There were 332 separate responses to the question; however, multiple categories were identified where individuals had access to more than one source of income.

Twenty percent identified gifts from children, relatives, or churches as a source of income. The largest gifts were from churches. Churches provide a significant amount of money to the Apache people for specific purposes. Many of the gifts are earmarked for clothing expenditures for school-age children, but even so, gifts represent an important category of funds for the reservation people.

Income from the sale of handicrafts was identified by nearly 11 percent of the respondents. Reservation women produce baskets, beadwork, and other articles for distribution.

Approximately 43 percent earn income from a trade. The category includes unskilled jobs as well as those requiring more skilled performances such as carpenters, auto mechanics, and nurses.

Fifty-five percent identified unearned sources of income. These include assistance payments from the Bureau of Indian Affairs; assistance payments from other public or private sources; gifts from children, relatives, or churches; pensions, including Social Security; veterans' payments; and unemployment compensation. It is evident that unearned income is a highly important factor contributing to the ability of the San Carlos Apache to keep a reservation residence.

Approximately 14 percent had not received income from any source during the past year. On the part of some, it is possible that they are still legally defined as dependent children and, therefore, income for their support is received by others responsible for their well-being. Still others undoubtedly are dependent upon other family members and are permitted to share such income as is received.

It is significant to note that self-employed income is received by some of the Apaches. Most of this income is obtained from cattle ranching endeavors, although some is earned in other unrelated pursuits such as stores and gasoline stations.

TABLE XXXIX
SOURCES OF INDIVIDUAL INCOME

Source	Percent*
Gifts from children, relatives, or churches	20.5
Sale of handicrafts	10.5
Self-employed income (includes business, farm, trade or professional enterprise) individual or partnership	6.0
Earnings from a farm, ranch, or other business	8.1
Earnings from a trade	43.4
Pensions	4.2
Assistance payments from Bureau of Indian Affairs	7.8
Assistance payments from other public or private sources	9.6
Interest or dividends on personal loans and investments	3.6
Income from royalties, leases, timber sales, annuities	4.8
Judgment or settlement funds	0.0
Sale of property	4.8
Veterans payments	1.2
Social Security	10.2
Unemployment insurance	1.8
None	13.6
Other	9.9

N = 332
* Does not sum to 100 percent because of multiple income sources.

Unemployment insurance is not extensively received by the on-reservation Indian; only 1.8 percent had income from it. It is possible that this is due largely to the seasonality of a great deal of the employment in uncovered industries. It is also possible that a great many terminate their jobs prior to qualifying for such benefits.

Those With No Income

Of the forty-five residents reporting no income, thirty-two were women and thirteen were men. Those without income constitute 12.9 percent of the total population. Residents with no income account for 17.3 percent of the females and 7.9 percent of the males. Most of the males (77 percent) who reported no income were

students. Most of the females who reported no income were keeping house (62.5 percent); however, going to school was also an important activity of those females who received no income.

Females with no income are dispersed over the age groups, as may be seen in Table XL. Males with no income are concentrated in the younger age groups as revealed in Table XLI; this reflects the fact that most of those with no income are students. Even in the case of women, however, those with no income tend to be younger than the San Carlos population in general. This can probably be attributed to the housekeeping responsibilities of young San Carlos married women. In general, the data suggest that the best explanation for not having income is the youthfulness of both men and women. This youthfulness results in many men being in school and many women being tied down with household duties. It should be noted that the level of education attained does not offer an explanation for the

TABLE XL

AGE DISTRIBUTION OF FEMALES WITH NO INCOME

Age Group	Percent of Females with No Income	Percent of All Females in Age Group
16-19	15.6	12.4
20-29	34.4	19.5
30-39	25.0	23.8
40-49	15.6	18.4
50-59	3.1	12.4
60-69	6.3	9.2
70 and over	0.0	4.3
TOTAL	100.0	100.0

N = 32

absence of income. Both males and females with no income have median education levels of nine years. This compares favorably with the reservation as a whole.

Earnings from a Trade

Earnings from a trade is the most frequently mentioned source of income on the San Carlos Reservation. Of the respondents, 43.4 percent reported income from this source; forty-eight were women

TABLE XLI
AGE DISTRIBUTION OF MALES WITH NO INCOME

Age Group	Percent of Males with No Income	Percent of All Males in Age Group
16-19	69.2	15.8
20-29	15.4	18.8
30-39	0.0	24.9
40-49	7.7	12.1
50-59	7.7	12.1
60-69	0.0	9.7
70 and over	0.0	6.7
TOTAL	100.0	100.1*

N = 13
* Does not sum to 100 percent due to rounding.

and ninety-six were men (men are twice as likely to have earnings from a trade as women). It may be seen in Table XLII that earnings from a trade are most important to the 20-39 age group. This is the group that has relatively high labor force participation rates. Older females do not appear to have access to this type of income on the San Carlos Reservation. Older men, on the other hand, still participate in their trades and constitute an important source of income for family support. Teen-aged workers also supply income to families;

TABLE XLII
DISTRIBUTION OF EARNINGS FROM A TRADE
(By sex and age)

Age Group	Percent of Females	Percent of Males
16-19	12.5	13.5
20-29	29.2	24.0
30-39	29.2	33.3
40-49	18.8	13.5
50-59	10.4	8.3
60-69	0.0	5.2
70 and over	0.0	2.1
TOTAL	100.1*	99.9*

N = 48 females; 96 males.
* Does not sum to 100 percent due to rounding.

13.5 percent of teen-aged males and 12.5 percent of females report earnings from a trade. The tendency, on the part of both sexes, to withdraw from the labor force after age 40 is reflected in the table.

Self-employment and Ownership Income

The respondents to the questionnaire were also asked if they had any income from self-employment activity, and if they had any income from ownership of a business. The distinction between these two types of income is essentially the distinction between income associated with work and income associated with ownership of an economic asset. For example, a person could have a proprietary interest in a business and derive income from that business but take no part in the operation of the business; such a person does not

TABLE XLIII
SELF-EMPLOYMENT INCOME AND INCOME FROM OWNERSHIP
(By sex and age)

Age Group	Percent of Males with Earnings from Ownership	Percent of Males with Self-employment Income	Percent of Females with Earnings from Ownership	Percent of Females with Self-employment Income
16-19	0.0	7.7	0.0	0.0
20-29	20.0	30.8	14.3	14.3
30-39	35.0	15.4	28.6	14.3
40-49	15.0	23.1	14.3	14.3
50-59	5.0	7.7	0.0	57.1
60-69	15.0	7.7	14.3	0.0
70 and over	10.0	7.7	28.6	0.0
TOTAL	100.0	100.1*	100.1*	100.0

N = males: 20 ownership, 13 self-employment; females: 7 ownership, 7 self-employment.
* Does not sum to 100 percent due to rounding.

receive self-employment income, and 8.1 percent of the respondents received income from the ownership of a business. The specific breakdown is illustrated in Table XLIII. Both of these sources of income are more likely to accrue to men than women. Of the twenty-seven people reporting income from ownership, twenty are men. Of the twenty people reporting self-employment income, thirteen are men. There appears to be a tendency for income from ownership to be

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associated with older people. For men, 45 percent of those who had income from ownership are 40 years of age or older. Fifty-seven percent of the women who received income from ownership are 40 years of age or older. Note also that there is a heavy concentration of women receiving this source of income in the 60 and older group. Self-employed income does not appear to be related to age. Some men in each age group have self-employed income. Women in the 50-59 age group appear to have more self-employed income than women in other groups.

Income from Handicrafts

The data reveal that 10.5 percent of respondents reported income from handicrafts, which is primarily a female source of income. Twenty-nine of the thirty-five people in the survey reporting this source of income are females. As shown in Table XLIV, younger females do not appear to engage in handicrafts. Handicrafts represent an important source of income to those 60 years of age and older, except that there does not appear to be any pattern between age of men and access to this source of income.

TABLE XLIV
DISTRIBUTION OF INCOME FROM HANDICRAFTS
(By sex and age)

Age Group	Percent Females	Percent Males
16-19	3.5	16.7
20-29	13.8	16.7
30-39	24.1	16.7
40-49	17.2	16.7
50-59	17.2	16.7
60-69	20.7	16.7
70 and over	3.5	0.0
TOTAL	100.0	100.2*

N = 29 females; 6 males.
* Does not sum to 100 percent due to rounding.

Assistance Payments

Assistance payments constitute an important source of income on the San Carlos Reservation. Bureau of Indian Affairs assistance is

provided to 7.8 percent of those in the survey. Assistance from other sources, primarily the State of Arizona, is provided to 9.6 percent of those in the survey. When these two sources are combined, assistance payments become one of the most frequently mentioned sources of income on the reservation. Of the twenty-six people in the survey receiving BIA assistance, eleven were women. As indicated in Table XLV, there does not appear to be any relationship between age and the female receipt of BIA assistance. Men receiving this source

TABLE XLV
DISTRIBUTION OF INCOME FROM BIA ASSISTANCE
(By sex and age)

Age Group	Percent Females	Percent Males
16-19	18.2	20.0
20-29	0.0	20.0
30-39	18.2	13.3
40-49	18.2	0.0
50-59	.2	20.0
60-69	18.2	20.0
70 and over	9.1	6.7
TOTAL	100.1*	100.0

N = 11 females; 15 males.
* Does not sum to 100 percent due to rounding.

of income are in the younger and older age groups. Table XLVI illustrates that welfare from sources other than the BIA was received by thirty-two individuals in the survey, of whom eighteen are women. The relationship between age and the receipt of welfare benefits from sources other than the BIA is presented in Table XLVI. No clear-cut pattern emerges from this table. It is obvious that welfare benefits are provided a large segment of the population and are not highly concentrated among individuals of a particular age.

Income from Social Security

Social Security payments were received by 10.2 percent of those responding to the questionnaire on the San Carlos Reservation. This was the fourth most frequently mentioned source of income. Of those receiving this source of income, sixteen were women. As shown in

TABLE XLVI
DISTRIBUTION OF INCOME FROM PUBLIC AND PRIVATE SOURCES OTHER THAN BIA
(By sex and age)

Age Group	Percent Females	Percent Males
16-19	16.7	21.4
20-29	11.1	14.3
30-39	16.7	7.1
40-49	27.8	14.3
50-59	11.1	21.4
60-69	16.7	7.1
70 and over	0.0	14.3
TOTAL	100.1*	99.9*

N = 18 females; 14 males.
* Does not sum to 100 percent due to rounding.

Tables XLVII and XLVIII, those individuals who received Social Security tended to be in the older age groups. This is especially true for males; there is more dispersion in age of females who receive this income. This difference in age distribution can be attributed to the different circumstances under which women can receive Social Security payments. Most of the male recipients would appear to be

TABLE XLVII
DISTRIBUTION OF INCOME FROM SOCIAL SECURITY
(By sex and age)

Age Group	Percent Females	Percent Males
16-19	6.3	5.6
20-29	0.0	5.6
30-39	12.5	0.0
40-49	18.8	0.0
50-59	25.0	11.1
60-69	12.5	38.9
70 and over	25.0	38.9
TOTAL	100.1*	100.1*

N = 16 females; 18 males.
* Does not sum to 100 percent due to rounding.

people who are using Social Security as a source of retirement income. The proportion of females 60 years or over who receive Social Security payments is 13 percent. The relatively small proportion of the elderly receiving these payments reflects the isolation of the San Carlos economy from the Social Security system.

TABLE XLVIII
PERCENTAGE OF SAN CARLOS INDIANS RECEIVING SOCIAL SECURITY BENEFITS
(Selected age groups)

Age Group	Percent Females in Each Group	Percent Males in Each Group
All age groups	8.7	10.9
60-69	11.8	43.8
70 and over	50.0	63.6

N = 16 females; 18 males.

Unemployment Insurance

Unemployment insurance is not an important source of income on the San Carlos Reservation. Only 1.8 percent of those in the survey reported income from this source. The reason that so few people receive unemployment insurance payments even though unemployment is widespread is fairly obvious. Many of the unemployed have not worked in industries covered by the unemployment insurance system. In addition many of the unemployed fail to work the number of weeks necessary to qualify for benefits. Others may have exhausted benefits under the law. The relative unimportance of this source of income coupled with the relative unimportance of Social Security payments demonstrates that conventional social insurance schemes are not well adapted to Indian reservation life. It is not surprising that Indians have maintained some of their traditional forms of social insurance.

Other Sources of Income

Six additional income categories were probed through the Indian Manpower Resource Study questionnaire. One of these deserves particular comment: of those responding to the questionnaire, 20.5 percent reported gifts as a source of income. This was the second

most important source of individual income on the San Carlos Reservation. Of the sixty-eight people reporting income from gifts, fifty-one were women. There did not appear to be any relationship between age and this income. The importance of gifts as a source of income reflects the income sharing on the San Carlos Reservation. Agricultural allotments were received by 4.8 percent of those responding to the questionnaire. This source of income may reflect the importance of cooperative agricultural operations on the San Carlos Reservation.

Most Frequently Mentioned Sources

One indication of the importance of an income source to a particular age group is the frequency with which the age group mentions it. The most frequently mentioned income sources for female age groups is presented in Table XLIX. Gifts appear to be an important source of income for all but one age group. Earnings from a trade

TABLE XLIX
MOST FREQUENTLY MENTIONED INCOME SOURCE OF FEMALES
(By age)

Age Group	Most Frequently Mentioned Income Source	Percent of Females in Age Group Receiving Source*
16-19	Gifts	34.8
	Earnings from a trade	26.1
20-29	Earnings from a trade	31.8
30-39	Earnings from a trade	31.8
	Gifts	25.0
40-49	Gifts	38.2
	Earnings from a trade	26.5
50-59	Gifts	26.1
	Handicrafts	21.8
	Earnings from a trade	21.8
	Other	21.8
60-69	Handicrafts	35.3
	Gifts	23.5
70 and over	Social Security benefits	50.0
	Gifts	37.5

* Does not sum to 100 percent due to multiple responses.

is the most important source for younger age groups. Handicraft income becomes more important to older San Carlos females.

The most frequently mentioned income sources for male age groups is presented in Table L. As can be seen the pattern for men is more simple than that for women. Earnings from a trade is the most important source for all groups below 60 years of age. Social Security payments are important to those 60 years of age or over.

TABLE L
MOST FREQUENTLY MENTIONED INCOME SOURCE OF MALES
(By age)

Age Group	Most Frequently Mentioned Income Source	Percent of Males in Age Group Receiving Source*
16-19	Earnings from a trade	50.0
20-29	Earnings from a trade	74.2
30-39	Earnings from a trade	78.1
40-49	Earnings from a trade	65.0
50-59	Earnings from a trade	40.0
60-69	Social Security benefits	43.8
	Earnings from a trade	31.3
70 and over	Social Security benefits	63.6

* Does not sum to 100 percent due to multiple responses.

Income by Education and Sex

The level of educational attainment is often taken as an indicator of one's ability to compete for scarce jobs. In addition, the level of earnings obtained by those with higher educational achievements can serve as an incentive for the young to pursue more education than that obtained by the previous generation. Table LI provides data on income received by sex and educational attainment levels. Data contained in the table are on the basis of 165 male and 185 female responses. The San Carlos Apache was often reluctant to reveal information pertaining to income, which is reflected in the information not available category. Nearly one-fourth of the total refused to provide income data. The discussion that follows in this section is based on the information provided by cooperating interviewees.

It is clear from Table LI that approximately 77 percent of females and 70 percent of males receive incomes of less than $3,000 per year.

Nearly one-half of all women receive less than $500 annually. Roughly 17 percent of females receive no income, and about 8 percent of males report no income. Thirty-two percent of women also revealed incomes of $1-499, and 22 percent of men fall in the same income category. It is obvious that opportunities for both sexes are limited, but more so for women than men. Female workers are largely concentrated in the lower-income categories, and males fare better relatively at higher levels than do females.

It is important to observe that female high school graduates fare as well as their male counterparts. While it is apparent that only male high school graduates earn $10,000 or more per year, females have greater success in the $5,000-9,999 category. This fact can be largely attributed to the types of reservation work available to women in the Indian Hospital, public schools, and Bureau of Indian Affairs. Men obtain more jobs in the $3,000-4,999 category than do women, but when the two sexes with high school diplomas are compared in all the income categories, women do well.

Men with college training often do well relative to the rest of the population; 2.4 percent earn in the $5,000-9,999 category. However, college does not automatically guarantee higher earnings on the reservation as is evidenced by some college-trained men earning in the $500-999 (0.6 percent) and $1,000-1,999 (0.6 percent) categories. The level of income of Indians with some college training appears to depend largely upon whether their skills are in demand by government agencies on the reservation.

Men seem to fare about equally well with eighth grade educations or more. There may be a slight advantage for those with higher educational attainments, but the existing reservation jobs do not currently prove the case. The advantages of education for on-reservation Indians may become more apparent as older men are replaced by younger ones. However, it appears that educational attainments rise at a more rapid rate than jobs are made available. The same result seems probable among women, too. If the observation just made has any validity at all, at least two possible consequences may result. Indeed, they seem inevitable.

First, it is possible that quit-rates (the rates at which jobs are quit per hundred) among Indians on the reservation will be high. This is likely to occur particularly when the individual can name his successor. Such a situation would permit a father to step aside in favor of a son and do so without a second consideration since the

TABLE LI
INCOME BY EDUCATION AND SEX
(Percent)

		Income									
Education	Sex	$ 0	1-499	500-999	1000-1999	2000-2999	3000-4999	5000-9999	10,000 +	Info. Not Avail.	TOTAL
None	M	0.6	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	1.2
	F	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.5	1.6
1	M	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	1.2
	F	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
2	M	0.0	0.6	1.2	0.6	0.0	0.6	0.6	0.0	0.6	4.2
	F	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
3	M	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	1.2
	F	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
4	M	0.0	0.0	1.2	0.0	0.6	0.0	0.0	0.0	0.0	1.8
	F	0.5	1.6	0.5	0.5	0.5	0.0	0.0	0.0	0.5	4.1
5	M	0.0	1.2	0.6	2.4	0.0	0.0	0.0	0.0	0.6	4.8
	F	0.5	2.2	0.5	0.5	0.0	0.0	0.0	0.0	1.1	4.8
6	M	0.6	0.0	0.6	1.2	0.6	1.8	0.6	0.0	0.0	5.4
	F	0.0	2.2	2.7	2.7	0.0	0.0	0.0	0.0	1.1	8.7
7	M	0.6	1.2	0.0	1.2	0.0	0.0	0.6	0.0	0.6	4.2
	F	1.1	1.6	1.1	0.0	0.5	0.0	0.0	0.0	2.2	6.5
8	M	0.6	3.0	1.2	3.6	1.2	2.4	0.6	0.0	1.2	13.8
	F	3.8	5.4	1.6	1.1	1.6	0.0	0.0	0.0	1.1	14.6
9	M	3.6	4.2	2.4	3.0	1.8	1.8	1.2	0.0	0.0	18.0
	F	2.7	2.2	2.2	0.5	0.5	0.5	0.5	0.0	1.6	10.7
10	M	1.2	5.5	1.2	2.4	1.2	3.6	0.6	0.0	1.2	16.9
	F	4.9	7.0	0.0	1.6	0.5	0.5	0.5	0.0	3.8	18.8
11	M	0.6	4.2	2.4	1.2	0.0	1.8	0.0	0.0	1.2	11.4
	F	2.2	4.3	1.1	0.5	0.0	0.5	0.0	0.0	1.1	9.7
12	M	0.0	1.2	1.2	0.6	0.6	3.0	1.2	0.6	0.0	8.4
	F	0.5	2.7	1.1	2.7	0.0	1.1	1.6	0.0	2.7	12.4
13	M	0.0	0.0	0.6	0.6	0.0	0.0	1.2	0.0	0.0	2.4
	F	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	1.6	2.1
14	M	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.6
	F	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15+	M	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.6
	F	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Info. not available	M	0.0	0.6	1.2	0.6	0.0	0.0	0.0	0.0	0.6	3.0
	F	0.0	0.5	0.0	1.1	0.5	0.0	0.0	0.0	0.5	2.7
TOTAL	M	7.8	21.7	13.8	20.4	6.0	15.0	7.8	0.6	6.0	99.1*
	F	17.3	32.0	11.9	11.2	4.1	2.6	2.6	0.0	17.8	99.5*

N = 165 males; 185 females.
* Does not sum to 100 percent due to rounding.

system of income sharing would not invoke a large penalty upon the individual for such action. It should also be recognized that the same system of income sharing is likely to generate high quit-rates because of the necessity to relinquish earnings in favor of the larger group.

Second, the accumulating pool of surplus labor with more education than previous generations is likely to result in disincentives for Indian youth to continue to seek higher levels of education. Most of the jobs available on the reservation may appear to the young to be held by persons with lesser educational qualifications. It may be that their only hope is a greater attrition rate.

Both situations just mentioned, if realized, can result in a reservation population with diminishing abilities to compete for scarce jobs on an open labor market. Such a situation may well occur among both sexes, but it is more likely with men than women. The large non-response rate among women may conceal a tendency for women to fare better than is revealed in Table LI. Alleviation of the economic situation for both sexes may ultimately depend upon the willingness of a proportion of the population to leave the reservation to work.

Consumption Patterns

Patterns of consumption expenditures provide insights into possibilities for training Indians to operate on-reservation businesses. Data regarding expenditures are analyzed by income category of family, items on which income is spent, and where money is spent. Expenditures also provide insights into family accessibility to transportation. Families that expend a portion of their income on automobile repairs are likely to have some means of commuting to off-reservation places to either work or look for work.

Respondents were asked separate questions regarding where their families purchased groceries, automobile repairs, and clothing. It was of intrest to learn if they usually purchased such items on or off the reservation, part on and part off, or did not allocate a portion of income to such items at all.

Purchase of Goods and Services

Table LII reveals the places where the San Carlos Apache usually purchase their goods and services. The three categories combined tend to give insights into the extent of travel to off-reservation places for family expenditures.

TABLE LII
WHERE GOODS AND SERVICES ARE PURCHASED BY FAMILIES
(Percent)

Place	Item		
	Groceries	Automobile Repairs	Clothing
On-reservation	47.6	4.4	31.2
Off-reservation	12.5	26.4	19.9
Half and half	39.9	11.1	48.3
Do not know		0.6	0.6
None		57.5	
TOTAL	100.0	100.0	100.0

N = groceries 343; automobile repairs 341; clothing 346.

Grocery items are usually purchased on the reservation by less than one-half (47.5 percent) of families. Alternatively, off-reservation stores as the usual place of purchase was revealed by only 12.5 percent of families. A high percentage (39.9) frequent both on- and off-reservation about equally. It may well be that some Indians find that the stores in adjacent areas have a wider range of goods from which to select. Also, it may well be that some Apaches live in areas that are closer to neighboring off-reservation communities than to Indian villages and towns with trading posts. Some may find prices more acceptable in supermarkets as opposed to the general merchandising stores on Indian property. A large number of San Carlos Apaches buy a portion of their grocery items in non-Indian towns.

Automobile repairs provide a rough indication regarding the extent of car or truck ownership. Roughly 57 percent of families do not purchase auto repairs. It is likely that they do not own cars or trucks. If such is the case then access to neighboring areas to seek jobs or to work is limited. Only 4 percent of families provide their repair needs from reservation garages. Twenty-six percent usually take care of their needs at off-reservation service stations or garages and 11 percent obtain needed services from both town and reservation sources. The lack of use of on-reservation servicemen may stem from quality of work, or it may mean that there is a shortage of such skills on the reservation.

Despite the lack of car or truck ownership, the Apache seems to find a means of visiting off-reservation places as is evidenced by the source of grocery purchases. Undoubtedly, there is significant reliance on friends and relatives for transportation.

Clothing purchases are likely to be made both on- and off-reservation. Thirty-one percent of families usually purchase such items as are bought from the on-reservation general stores. Only 20 percent of families usually patronize off-reservation clothing merchants, but another 48 percent shop about equally in reservation general stores and off-reservation clothing stores. It is likely that nonreservation stores offer a wider variety for selection than the on-reservation general stores, which stock only the more popular items demanded. The availability of credit terms may also influence the Indian in making a choice between stores in his own community and those in adjacent towns.

Method of Payment

Lower-income families are likely to have considerable dependence upon credit arrangements when purchasing most items in their market baskets. Once low-income families are extended credit, particularly for groceries, their freedom of choice in store selection becomes more limited. Credit is more likely to be available from stores located on Indian land than from merchants in nearby towns. Table LIII provides insights into the range of choice facing Indian consumers.

Credit purchases are important in every category of consumer expenditures. Grocery credit is the most important because of the continuing nature of needs. Seventy-seven percent of families usually provide their grocery needs on a credit basis. Only 22 percent usually pay cash for groceries at the time of purchase. It is more likely

TABLE LIII
METHOD OF PAYING FOR FAMILY PURCHASES
(Percent)

Method of Payment	Item		
	Groceries	Automobile Repairs	Clothing
Cash	22.2	52.8	33.6
Credit	77.0	40.3	65.8
Oil company credit card		2.8	
Do not know	0.9	4.2	0.6
TOTAL	100.1*	100.1*	100.0

N = groceries 343; automobile repairs 144; clothing 345.
* Does not sum to 100 percent due to rounding.

that cash is required at off-reservation markets than at trading posts in Indian communities. Credit is difficult for Apaches to establish in nonreservation stores and it is probable that the low-income families find themselves restricted largely to trading posts to provide for their consumer needs.

Slightly more than one-half (52.8 percent) of families purchasing automobile repairs do so on a cash basis. Nearly 40 percent, however, have access to repairmen that extend credit when work is performed. Only 3 percent have access to oil company credit cards to provide for credit needs. The Apache obviously obtains credit from gas stations and garages in neighboring non-Indian areas.

It is possible that on-reservation purchases are largely made by families in the lowest-income categories because of the greater need for credit to consumate transactions. Families with the lowest incomes are not as likely to qualify for credit in nonreservation stores as from trading post merchants on Indian land. For this reason, we now turn to an analysis of cash and credit payments by family income category.

Method of Payment by Family Income Level

Table LIV provides additional information regarding the nature of cash and credit purchases by family income level. Regarding grocery purchases, credit is an important element in providing needs regardless of income level. Families receiving $10,000 per year or more make use of credit as much as families in the $500-999 category. Credit obviously is not as important to the groups in the higher brackets as it is to families at the lowest levels. However, those with the larger incomes may not receive funds on a regular basis. Income received may be irregular over the year and correspond to periods when cattle sales are made; credit terms would then be highly important during the interim period. Lower-income groups receive funds on a regular basis, but the total received is not sufficient to permit spreading cash expenditures over the entire period. The group receiving less than $500 annually may well depend on credit to allocate their funds for subsistence as opposed to expenditures on less essential items.

The $5,000-9,999 category revealed the highest incidence of credit use followed by the less than $500 and $2,000-2,999 family income brackets. Grocery credit is important for all groups. Freedom of

TABLE LIV
EXTENT OF CASH AND CREDIT USE BY INCOME LEVEL
(By percent of each income group)

Family Income	Item Purchased: Groceries Cash	Groceries Credit	Automobile Repairs Cash	Automobile Repairs Credit	Clothing Cash	Clothing Credit
$ 0 - 499	18.5	81.5	61.9	38.1	24.5	75.5
500 - 999	33.3	66.7	50.0	50.0	34.5	65.5
1,000 - 1999	30.6	69.4	62.5	37.5	40.8	59.2
2,000 - 2,999	18.2	81.8	28.6	71.4	26.5	73.5
3,000 - 4,999	24.0	76.0	60.6	39.4	48.0	52.0
5,000 - 9,999	17.9	82.1	66.7	33.3	32.1	67.9
10,000 and over	33.3	66.7	33.3	66.7	33.3	66.7
Info. not avail.	21.1	79.0	47.8	52.2	36.4	63.6

N = groceries 341; automobile repairs 138; clothing 343.
Note: Summation is horizontally by good or service in each income category.

choice in the selection of grocery stores appears limited. Some cash purchases are made by all groups, but the likelihood of dependence on particular stores is widespread.

Automobile Repairs. Automobile repairs provide a rough indicator regarding the ability of families in the various income groups to commute from area to area both on and off the reservation. Lower-income groups have greater restrictions on them than others because of the inability to purchase transportation and then to maintain such machines as are eventually acquired. The higher-income families are more likely to have the wherewithal to purchase later model automobiles and trucks that require lesser outlays for maintenance.

Families with incomes of less than $500 per year are likely to possess machines requiring more frequent repairs, but at the same time cash outlays are often needed because of the inability to honor relatively large bills incurred. Those receiving $2,000-2,999 annually appear to make greater use of credit, and this is possible because credit is more available to them than to lower-income categories. This group is also more likely to have a greater number of relatively old models of automobiles requiring constant maintenance.

Families receiving $3,000-9,999 utilize credit for maintenance purposes, but probably have later model cars, which require fewer outlays. Those earning $10,000 or more annually have greater access to credit from all sources. They are more likely to hold gasoline

credit cards and can, therefore, charge most repairs needed on their vehicles. Their needs are likely to be smaller than most other groups because of the lateness of models.

Clothing Purchases. Credit terms for clothing appear to be demanded about as extensively as for grocery purchases. Every income group requires credit for over one-half of clothing transactions. The necessity for such terms is more pressing for the lower-income categories than others, but is needed by all groups. The under $500 per year bracket makes fewer cash purchases than any other single group. The need for credit largely depends on family size, and some of the middle-income groups may make relatively small cash outlays for clothing because more members must be provided with clothes.

It seems apparent that all the income groups utilize credit arrangements extensively, which restricts choice of retail outlet significantly. Lower-income groups have little choice in deciding where to spend their limited incomes. It seems appropriate to assert that credit is utilized by all groups to the limits allowed by merchants.

Expenditure Patterns

It may be readily observed that only 23 percent of San Carlos Apache families provide their grocery needs on a cash basis. Seventy-seven percent make use of credit for such purchases. Only a third (33.7 percent) of the families supply their clothing needs by paying cash, while two-thirds resort to credit for those items that are bought. However, over one-half (55.1 percent) of families that must use automobile repair services do so on a cash basis.

The concentration of families in the lower-income categories reveals the importance of cash or credit by percent of the total using the particular method of payment. Cash outlays for the three categories of items are generally concentrated in three groups. The $0-499, $1,000-1,999, and $3,000-4,999 income levels generally account for the greatest percentages of families paying cash for purchases. One exception is in the $5,000-9,999 income group, which accounts for 18 percent of automobile repairs by use of cash. This latter income group is exceeded in importance only by the $3,000-4,999 group.

More families purchasing groceries fall in the less than $500 group than any other group, and they account for 29 percent of all families buying groceries on credit. The next largest group is the $3,000-4,999 group. Their importance in the use of both cash and credit for

TABLE LV
METHOD AND EXTENT OF PAYMENT BY FAMILY INCOME LEVEL
GROCERIES, AUTO REPAIRS, AND CLOTHING
(Percent)

Family Income	Method of Payment: Cash — Percent of Total Purchasing Item (1)Gro.	(2)Auto	(3)Cloth.	Cash — Percent of Total Paying Cash (4)Gro.	(5)Auto	(6)Cloth.	Credit — Percent of Total Purchasing Item (1)Gro.	(2)Auto	(3)Cloth.	Credit — Percent of Total Using Credit (7)Gro.	(8)Auto	(9)Cloth.
$ 0 - 499	5.0	9.4	6.7	22.1	17.1	19.8	22.6	6.5	21.0	29.2	14.5	31.7
500 - 999	2.6	2.2	2.9	11.7	4.0	8.6	5.3	2.2	5.5	6.8	4.8	8.4
1,000 - 1,999	4.4	7.3	5.8	19.5	13.2	17.2	10.0	4.4	8.5	12.9	9.7	12.8
2,000 - 2,999	1.8	2.9	2.6	7.8	5.3	7.8	7.9	7.3	7.3	10.2	16.1	11.0
3,000 - 4,999	3.5	14.5	7.0	15.6	26.3	20.7	11.1	9.4	7.6	14.4	21.0	11.5
5,000 - 9,999	1.5	10.1	2.6	6.5	18.4	7.8	6.7	5.1	5.5	8.7	11.3	8.4
10,000 or more	0.3	0.7	0.3	1.3	1.3	0.9	0.6	1.5	0.6	0.8	3.2	0.9
Info. not avail.	3.5	8.0	5.8	15.6	14.5	17.2	13.2	8.7	10.2	17.1	19.4	15.4
TOTAL	22.6	55.1	33.7	100.1*	100.1*	100.0	77.4	45.1	66.2	100.1*	100.0	100.1*

N = (1) Groceries = 341
(2) Auto repairs = 138
(3) Clothing = 343
(4) Cash = 77
(5) Cash = 76
(6) Cash = 116
(7) Credit = 264
(8) Credit = 62
(9) Credit = 227

* Does not sum to 100 percent due to rounding.

grocery purchases reflects the concentration of Indian families in these income categories.

Even though the families with less than $500 annual income are most numerous, they are not the major demanders of automobile repairs. The ownership of automobiles requiring considerable maintenance is more likely to be concentrated among families in the $2,000-4,999 income range.

Clothing needs requiring use of credit are again more pressing in the lowest-income category. Thirty-two percent of all clothing credit extended is to this group. Less than 1 percent of clothing credit is extended to the highest-income group.

Approximately 28 percent of families purchasing groceries on either a cash or credit basis receive less than $500 annually. However, this income group accounts for only 16 percent of those requiring automobile repairs. Twenty-four percent of families requiring automobile maintenance are in the $3,000-4,999 income group. Roughly one-half of San Carlos Apache families purchasing clothing items fall in the less than $500 annual income category. It is obvious that the bulk of family income is dissipated by this group in providing basic subsistence goods. The rural location of these families places them at a distinct disadvantage in the labor market because of a lack of means to commute back and forth to jobs. They are also handicapped in terms of consumer purchases because of a lack of monetary ability to provide for their needs. They are likely to pay higher prices for all items purchased because of the inability to select stores that have lower prices. The same is true with families in the $1,000-1,999 and $3,000-4,999 income categories.

These groups may be in need of consumer education programs, but the greater need is for a more adequate level of income, which, in turn, will provide greater freedom of choice. The need for job development is reflected in the consumption patterns of families. Consumer education programs, in the absence of measures taken to increase income, will probably not render satisfactory results.

NOTES

[1]Information in introductory section describing the San Carlos Reservation is not original. We are indebted to Stanford Research Institute, *The San Carlos Apache Indian Reservation*, Phoenix, Arizona, 1955.

Conclusions

The San Carlos Apache is relatively limited in off-reservation contacts. The Indians are isolated from non-Indians by more than geographic distance, although this is also a factor. Culturally, they are not currently equipped to compete for scarce jobs in an unsheltered labor market that is normally characterized by excessive unskilled labor. There is no reason to assume that the situation will automatically improve with time.

Median educational attainment of the San Carlos working-age population is grade nine. This is considerably below the median of 12.4 years for the overall U. S. population. In addition to the relatively lower educational attainments, but certainly indicative of problems connected with the use of the manpower resource, is the San Carlos Indians' inadequacy with the English language. Heavy reliance upon an Indian language in the home tends to decrease efficiency with English over the years. When Indians seek off-reservation employment, it is logical to assume that they would not compare favorably with non-Indians on pre-employment tests; educational and language deficiencies relative to the general U. S. population brings about this situation. Indians are aware that the lack of educational attainment and occupational experience often eliminates them from jobs.

San Carlos civilian labor force participation rates are low relative to the general U. S. population. The overall San Carlos labor force participation rate is 39.1 percent compared to 59.4 percent for the United States. Nevertheless, Indian males age 30-49 have participation rates that approach those of the United States. At the same time, a substantial number of San Carlos individuals have never worked. Of those not working during the year prior to the survey, 75 percent had never worked. Overall, the San Carlos Apaches tend to delay labor force entry and to generally exhibit an early withdrawal from it.

Many individuals who work do not put in a standard work year, which is defined as ten to twelve months; a majority work less. Little effort is made by individuals to locate jobs off the reservation. It has already been seen that many would have difficulties competing in unskilled labor markets. Many do not desire to compete for off-reservation jobs, even if their qualifications were equal. Nearly 48 percent of individuals 16 and over cite family responsibilities as a reason for not seeking employment. Essentially this means that they are unwilling to leave the reservation to seek or take jobs. Another aspect is ill-health and physical handicaps claimed by nearly 28 percent of working-age individuals. Early withdrawal from the labor force and work requiring less than a standard year may be partially explained by health factors and unwillingness to leave the reservation.

During the five years prior to the survey, approximately 54 percent of individual industry experiences were in government. Federal employment along with that provided by the tribe were predominant. State employment is almost nonexistent. Approximately one-third of all Indian work experience has been in the rendering of services: personal, janitorial, and domestic. Farming occupations are still very important to the San Carlos Indians. Approximately 18 percent of all occupational experiences during the five-year period was in agriculture and this was predominantly in cattle. The Indians consider cattle-related work as the most important in their limited array of experiences. It is in this category that they place major emphasis in attempts to attract businesses to the reservation.

It is important to note that 43 percent of individuals 16 and over earn income from unskilled or skilled employment, and much of this is not full-time work. This work pattern is reflected in relatively low individual and family median incomes. Median individual income falls in the $500-999 annual income bracket. Pooling of individual income from all sources results in a median family income in the $1,000-1,999 bracket. That all income is not earned is shown by the fact that 55 percent of working-age individuals receive unearned income from various sources. Unearned income is received as assistance payments from the BIA, assistance from state agencies, and other sources such as Social Security and gifts from churches and individuals.

The low family incomes must be used to support relatively large families with a median of five children. On-reservation Indians do not have many of the expenses that burden the general U. S. population, such as rent. Utilities are not purchased by some, and federal and

state income taxes may not be paid by a majority because of the large family deductions to which they are entitled. Despite some of the possible advantages in terms of fixed and variable living expenses, San Carlos individuals and families live in relative deprivation.

Dependence upon the extended family as the basic economic unit will probably continue into the foreseeable future. One reason life in the extended family is continued is economic necessity because of low incomes and inadequate training to compete for scarce jobs off the reservation. The extended family also has the effect of dampening individual incentives to seek and obtain employment because of obligations to share earnings with relatives. Thus, labor force attachments are likely to be only temporary on the part of most persons.

Even if San Carlos individuals desired to seek off-reservation employment, they lack transportation to do so; nearly 58 percent of families do not own automobiles or trucks, which would provide the basic transportation needs of the people to seek employment. This problem alone partially explains the relatively lower labor force participation rates. The mere lack of transportation, however, should not be taken as the major problem involved in assimilating San Carlos Apaches into the mainstream of economic life.

Education and skills training should be provided prior to undertaking other measures designed to raise the individual Indian's ability to contribute more to national income. The process of assimilation will be long, but measures undertaken to deal with the problems of poor utilization of Indian manpower should be the same as those designed for other U. S. citizens. The price mechanism should eventually prevail in bringing about a more efficient allocation of San Carlos manpower resources; however, it will have to be assisted for a time, and the eventual objective should be far more off-reservation employment than currently exists.